



The

CHEMIST AND DRUGGIST



For Retailer, Wholesaler and Manufacturer

AUGUST 29 1964

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SELLING
TOOTHBRUSH**



ALL THESE SELLING POINTS:

- Tynex tufts angled to clean between the teeth.
- Handle designed for maximum efficiency.
- Withstands regular sterilization with boiling water.
- Unique toothbrush with complete guarantee.

PLUS Consumer advertising support in Radio Times, Reader's Digest, Sunday Times Colour Magazine, Woman, Woman and Home.

COMBINED CIRCULATION OF OVER 11,600,000.

PLUS — FREE hygienic travel cap given with every Jordan Toothbrush sold during this summer.

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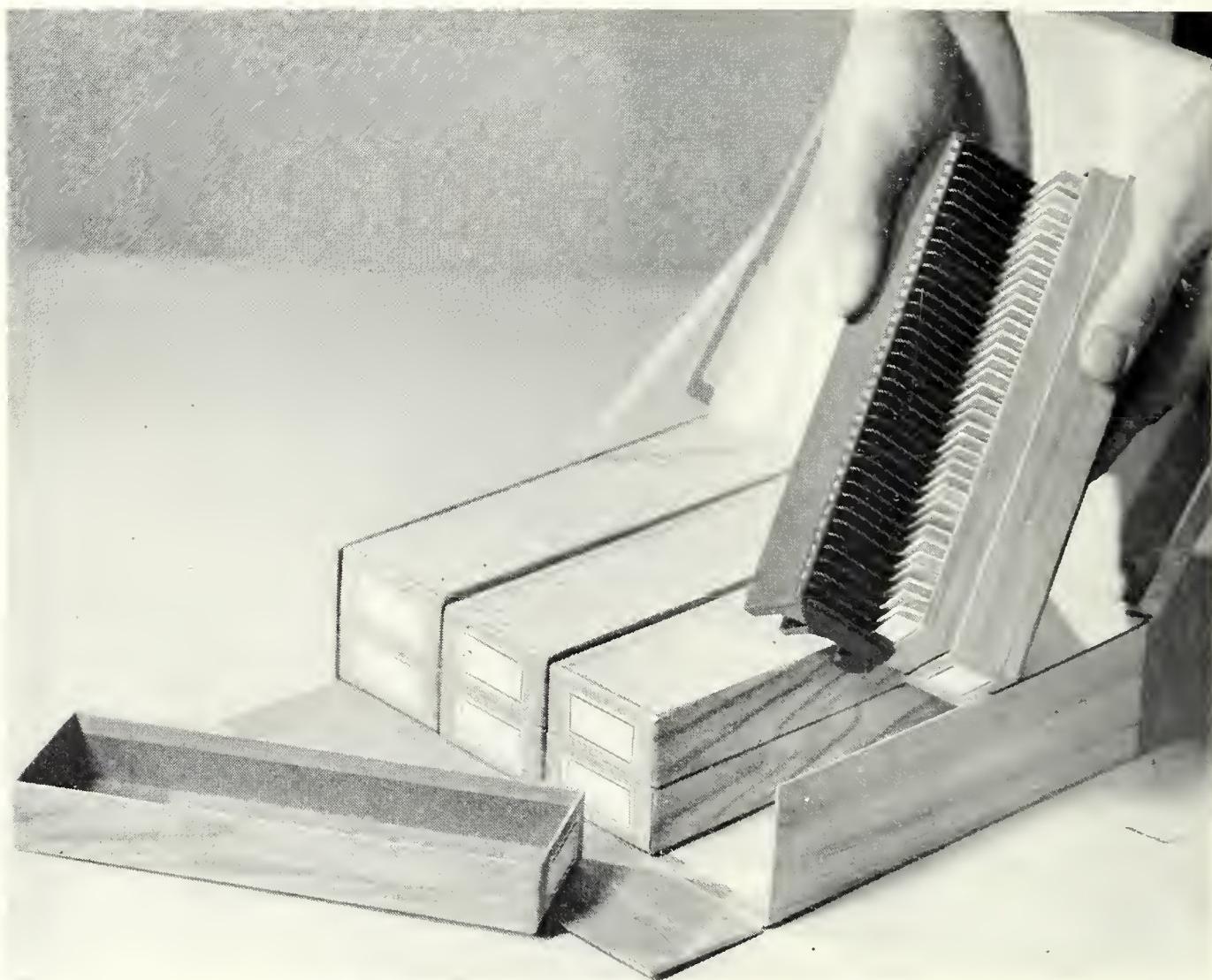
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A Robinson 35 mm. Slide Transfer and Storage Cabinet will hold 144 slides and at a much lower cost. All the projectionist has to do is to invert the box over the magazine and the slides are quickly transferred. By reversing this process slides are easily conveyed from the magazine back into the indexed box.

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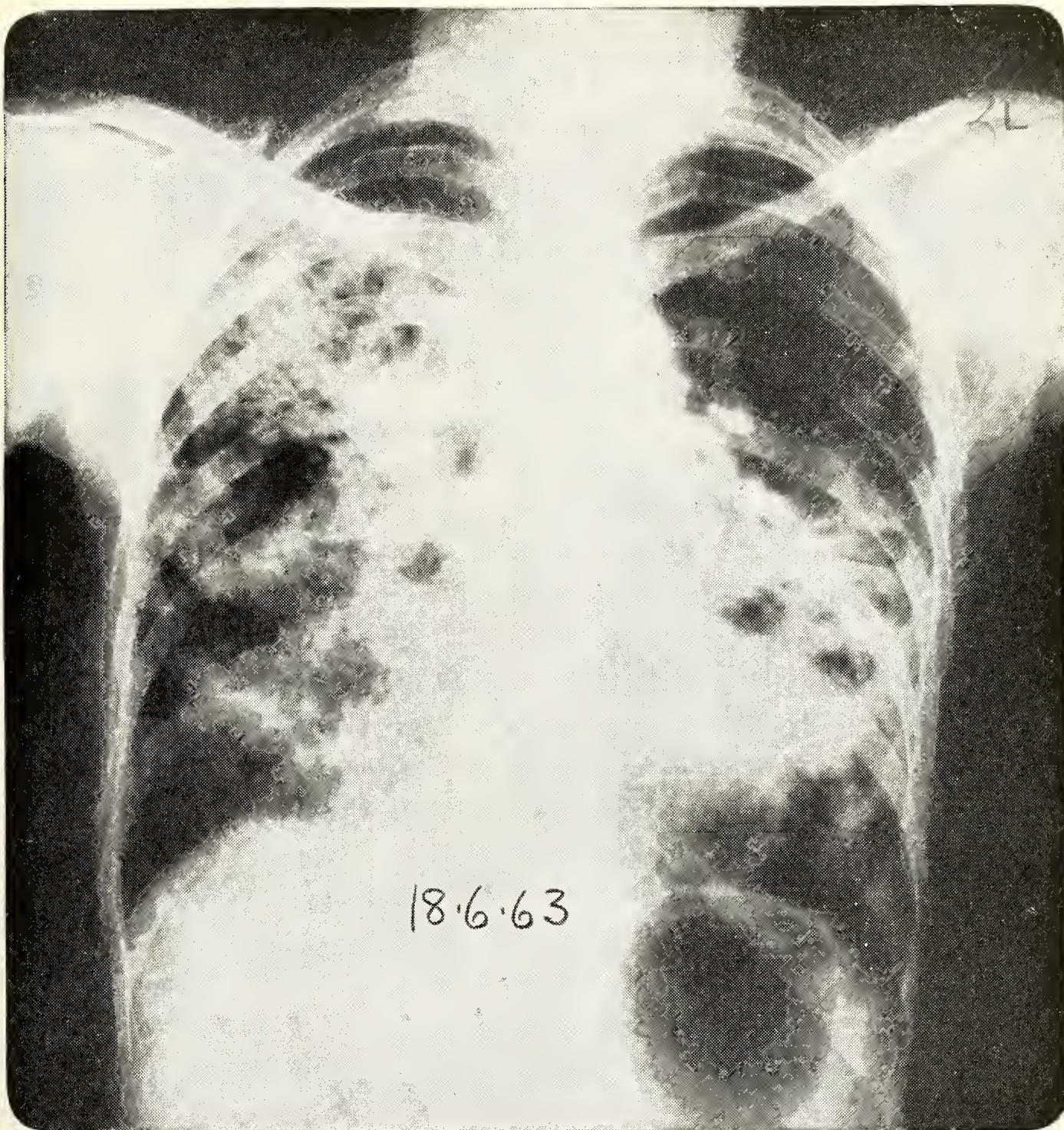


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OF CHESTERFIELD
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PASINAH-302

Six cachets of Pasinah-302 provide a total daily dosage of 12 G. Sodium PAS and 300 mg. Isoniazid B.P.

half-a-dozen of the other

PASINAH-6PH

Six cachets of Pasinah-6PH provide a total daily dosage of 10 G. Sodium PAS and 200 mg. Isoniazid B.P.

. . . or two quick drinks

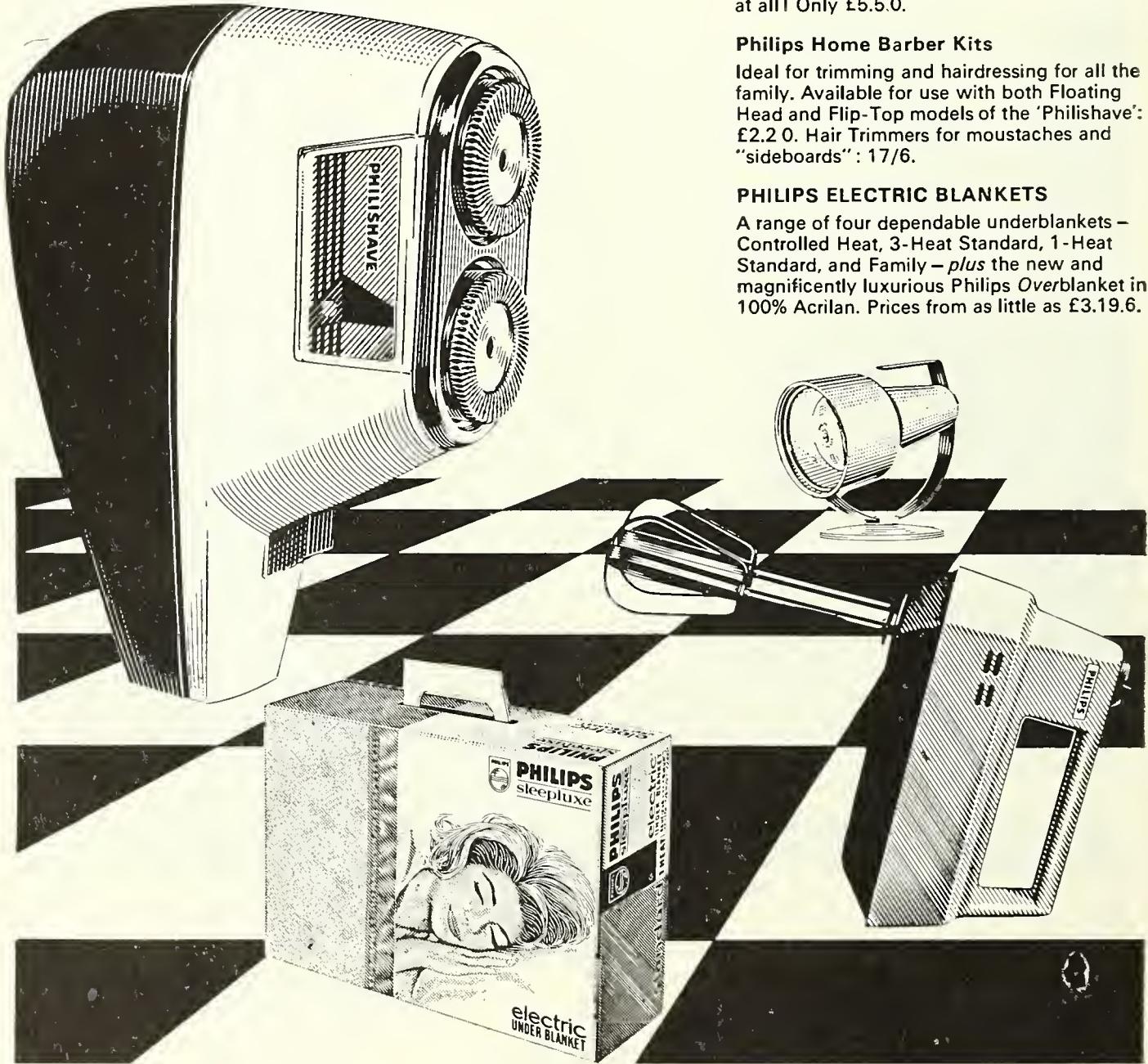
PASINAH-D

The first PAS preparation in which the taste of Sodium PAS is successfully disguised when in solution. In lime or raspberry flavours. The contents of two packets provide a total daily dosage of 12 G. Sodium PAS and 300 mg. Isoniazid B.P.

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Fantastic value – never before a dual-volt Rotary Action 'Philishave' at such low cost! £6.6.0.

Cordless (Battery Model)

Completely self-contained for superb Rotary Action shaving anytime, anywhere. No flex at all! Only £5.5.0.

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Ideal for trimming and hairdressing for all the family. Available for use with both Floating Head and Flip-Top models of the 'Philishave': £2.20. Hair Trimmers for moustaches and "sideboards": 17/6.

PHILIPS ELECTRIC BLANKETS

A range of four dependable underblankets – Controlled Heat, 3-Heat Standard, 1-Heat Standard, and Family – plus the new and magnificently luxurious Philips Overblanket in 100% Acrilan. Prices from as little as £3.19.6.

PHILIPS NEW 3-SPEED FOOD MIXER**FOOD MIXER**

Even more stylish, even more practical. The right speed for every type of mix – and a fantastically low price £5.50.

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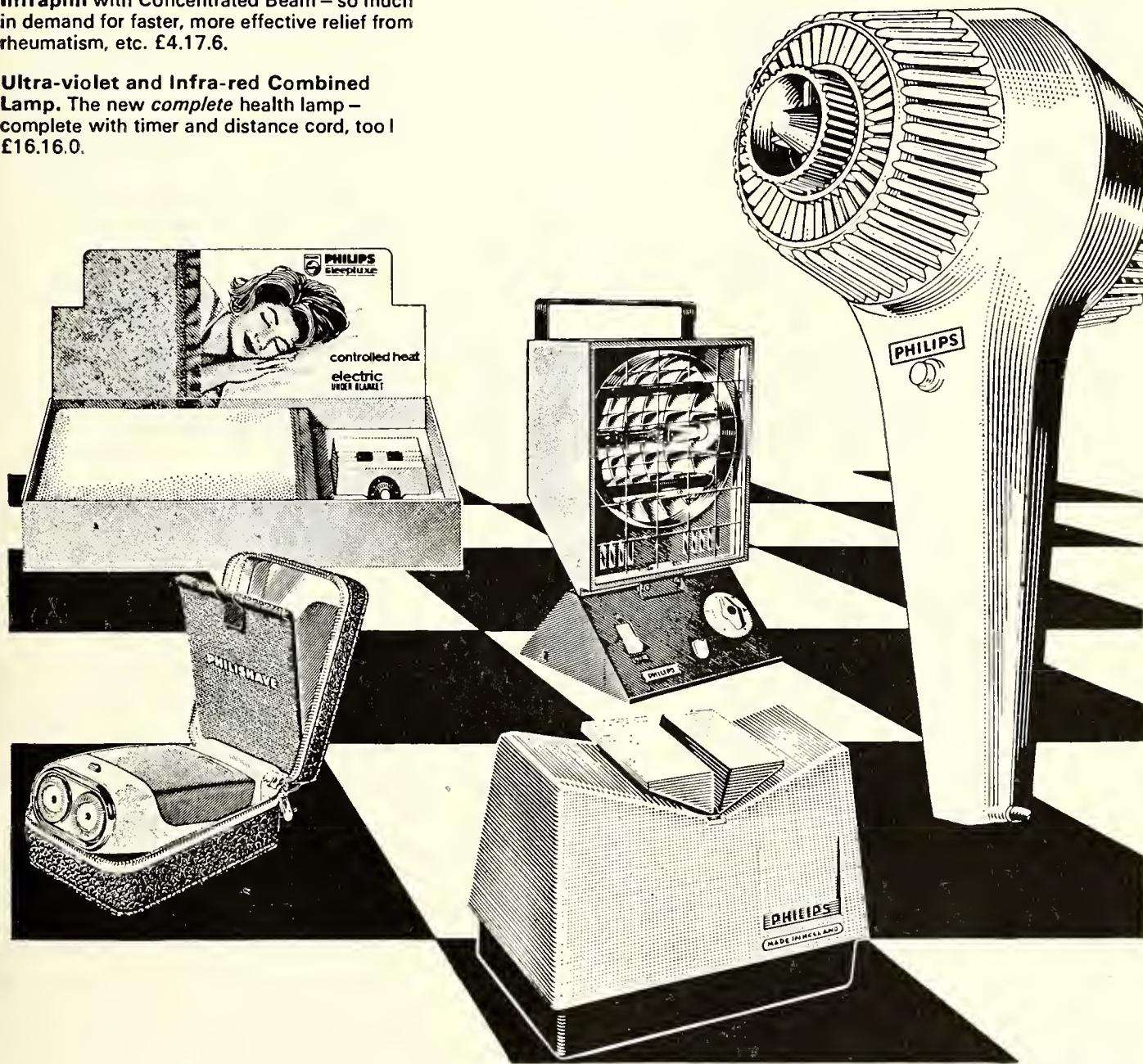
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Hand Model Light and easy to carry, ideal for use in the home or when travelling. Unique variable air-control. £3.9.11. Optional extras: Stand 12/6; Hose and Air-Diffuser Hood £2.

Hood Model Designed on the straight airstream principle to give the fastest, most efficient drying at home. £8.10.0. Optional extra: Stand £2.2.0.

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REVISED TERMS OF BUSINESS

Owing to the continuing increase in the cost of goods, transport
and administration it has become necessary for us to introduce the
following revisions. These come into effect on September 1st, 1964

MINIMUM VALUE ORDER - £5 EXCLUSIVE OF PURCHASE TAX

MINIMUM CARRIAGE PAID TERMS —

BY PUBLIC TRANSPORT - £7 EXCLUSIVE OF PURCHASE TAX

BY OUR TRANSPORT - £5 EXCLUSIVE OF PURCHASE TAX

**CERTAIN PRODUCTS ARE NOW AVAILABLE FROM B.D.H. AND THEIR
SUBSIDIARIES AND AGENTS (SEE ADVERTISEMENT PAGES 6 AND 7)**



CUXSON, GERRARD & CO. LTD. OLDBURY • BIRMINGHAM

Telephone : BROadwell 1355

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Mr. Smith's design

Mr. Smith maintains a very personal link with his customers. He dispenses for them. He serves them. He advises them. His personality is stamped on his business.

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On his Certor satchels there is the all-important name, "J. Smith," embodied in the design. It also appears on his Certor dispensing cartons. He keeps his name before the public. Smith's Pharmacy means something. It's all part of Mr. Smith's design to make to-day's customers look after tomorrow's.

SAMPLE WALLET

Special sample wallet of own-name printed satchels on request.

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ONE SALISBURY SQUARE • FLEET STREET • LONDON, E.C.4



IMPORTANT ANNOUNCEMENT

**CUXSON,
GERRARD
SPECIALITIES
NOW
STOCKED BY
THE BRITISH
DRUG HOUSES LTD.
SUBSIDIARIES AND AGENTS**



Products:

- CARNATION CORN CAPS
- ADAPTOPLAST First Aid Dressings
- AIDEX Burn and Wound Cream
- SANOID BABY POWDER & CREAM
- SANOID DUSTING POWDER
- G.P. ANTISEPTIC SOAP
- HEALO SKIN OINTMENT
- GYNOPAX TABLETS for relief of menstrual pains
- CARNATION CALLOUS CAPS
- SANOID Mouthwash Tablets
- SANOID BOIL TREATMENT
- DENTOSINE Mouth Hygiene
- SANOID BABY SOAP & PANTS
- EUPINAL Asthma Treatment
- TUSSOLATM Cough Treatment
- MINSTER BRAND CHILDREN'S COUGH LINCTUS
- THERMOID CREAM for Rheumatic pains

Messrs. CUXSON, GERRARD & CO. LTD. and THE BRITISH DRUG HOUSES LTD., Wholesale Division, have pleasure in announcing an agreement whereby B.D.H. will distribute Cuxson, Gerrard speciality products. As from 1st September, 1964, B.D.H. through its wholesale subsidiaries and agents, will carry stocks of the products listed above and in Cuxson, Gerrard List No. 55/1/3. Orders below £5 for these products will only be handled by B.D.H. Bonus terms will only apply to orders received by Cuxson, Gerrard direct.

Please note also Cuxson, Gerrard's change in terms announced on page 4.

Terms

Cuxson, Gerrard & Co. Ltd.
Minimum order £5
Carriage paid — public transport £7 or over excluding P.T.
Company transport £5 or over excluding P.T.
B.D.H. Ltd.
Normal Trade Terms.



Depots:

LONDON WHOLESALE DEPOT ...	London.	J. R. GIBBS LTD. ...	Paignton;	Bristol.
ROWLAND JAMES LTD. ...	Cardiff; Swansea.	MIDDLETON & CO. LTD. ...	Middlesbrough.	
B.D.H. (WOOLLEY & ARNFIELD) LTD. ...		Stockport;	Preston;	Speke.
B.D.H. (KNIGHTS) LTD. ...		Birmingham;	Nottingham.	
BRADLEY & BLISS LTD. ...		Reading;	St. Leonards-on-Sea;	Sandwich; Croydon.

Agents:

RIDLEY (WHOLESALE CHEMISTS) LTD. ...	Carlisle.	FAIRBANK KIRBY LTD. ...	Grimsby.
MAWSON & PROCTER PHARMACEUTICALS LTD. ...		Newcastle.	
HYDE & ENTWISTLE LTD. ...	Belfast.	EAST ANGLIAN W'SALE SUPPLIES LTD. ...	Norwich.
GRAHAM TATFORD LTD. ...		Portsmouth;	Ryde, I.O.W.

CUXSON, GERRARD & CO. LTD. **THE BRITISH DRUG HOUSES LTD.**
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Once upon a time there was no Nordia...

Evolution is taken for granted — Rocket to diesel-electric . . . Bleriot biplane to supersonic jet . . . Clipper to Cunarder . . . penny bazaar to super-store and, some say, modernisation to Nordia-isation. Fixed old shopfittings are changed

to handsome flexible new ones and harassed retailers given new heart by the Nordia consultancy service (evolved within a firm which has been doing specialist shopfitting for nearly a hundred years).

NORDIA
SHOPFITTING SYSTEM

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To: NORDIA, 25 Wellington St., Leeds or
94 Baker St., London W.1. Please let me have
further information about the Nordia System of Selling.

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ADDRESS _____

CD

André Philippe



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in four gorgeous colours

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- ★ MADRID ORANGE
- ★ CORAL RED
- ★ BERMUDA BLUE

Attractive and Elegant

Non-tarnishable gold cord with gold booklet

No. 21 PIGGY BANK
bubble bath

Price per doz 27/- P.T. 25%

Retail Price **3/II**

Holds 240
sixpences

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ORDER and RESERVE FORM

Please deliver to me by return () doz.

Please reserve for me and deliver on () doz.

No. 21 Piggy Bank Bubble Bath 27/- per doz. P.T. 25%

Name

Street

Town

County

(PLEASE WRITE IN BLOCK CAPITALS)



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Woman's Own

Merchandising Bulletin

No. 12 for Chemists

One in three of all your women customers will see these advertisements during the next month. Check your stocks now and cash in on this immense sales potential with window and counter displays wherever possible.

woman's own

DATED SEPTEMBER 5

Amami Styling Lotion
Anne French—Immac
Aspro
Carter & Sons
Crystal Products—Slimline
Dixor—Velouty
Endocil
Energen Foods
Germoloids
Glaxo—Farex
Golden Ltd.—Color-Glo.....c
Hartnell Cosmetics
Helena Rubinsteinc
Izal Soft Tissue.....c
Johnson & Johnson Petroleum Jelly
Lucozade
Mene
Milk of Magnesia
Oil of Ulay
Pears Soapc
Pepsodent
Poly Rangec
Reckitt's Wonder Set.....c
Ribena.....c
Saxin
Scholl—Nylastik
Veet 'O'

Vitapointe
Yardleyc

woman's own

DATED SEPTEMBER 12

Anadin
Andrex.....c
Beecham's Pills
Bonomint
Cidal Soap
Coty 'Light & Lovely'c
Daisy Powders
Delsey Toilet Tissue.....c
Elnett Hair Spray
Germolene
Golden Babe Nappies
Harmony Hair Colours.....c
Harrington's Napkins
Innoxa
Johnson & Johnson Baby Products
Junior Disprin
Lifebuoy Soap.....c
Moorland Indigestion Tablets
Nikini
Phillips Tonic Yeast
Plix
Polyhairset.....c
Robinson's Baby Cereals
Ronson Escort Electric Hairdrier

Saga—Aquanet
 Scholl Soft Grip
 Sunsilk Shampoo c
 Supersoft Shampoo c
 Tampax
 T.C.P.
 Valderma Balm

woman's own
 DATED SEPTEMBER 19

Aspro
 Beecham's Pills
 Crystal Products—Slimline
 Cuticura
 Germoloids
 Gibbs Melody c
 Glaxo—Ostermilk
 Goya Cosmetics c
 Hartnell Cosmetics
 Heinz Baby Foods
 Johnson & Johnson Baby Shampoo...c
 Lifebuoy Toilet Soap
 Lilia-White Sales c
 Lucozade
 Maws Teats
 Max Factor Creme Puff
 Moorland Indigestion Tablets
 Morny c
 NuNale
 Oil of Ulay
 Paddi & Paddi Pads
 Revlon Lipsticks & Nail Enamel c

Saxin
 T.C.P. Ointment
 Vitapointe
 Wright's Coal Tar Soap
 Yardley c

woman's own

DATED SEPTEMBER 26

Atkinson—Skin Deep c
 Bonomint
 Calypso
 Color Match
 Coty Measured Mist c
 Daisy Powders
 Endocil
 Energen Foods
 E.P. Tablets
 Innoxa c
 Lanoline Face Pack
 Lifebuoy Soap c
 L'Oreal Bleach
 Max Factor Lipsticks c
 Mene
 Phillips Tonic Yeast
 Plix
 P.L.J. c
 Silcot
 Soir de Paris
 Tampax
 Valderma Balm

c=Colour Advertisement

**7½ million women come shopping
 every week with *Woman's Own***

The next *woman's own* Merchandising Bulletin will appear in the September 26 issue of Chemist and Druggist.

If you would like further copies of this Bulletin, or would like to receive them regularly by mail, please write to the Merchandising Manager, Woman's Own Advertisement Department, GEORGE NEWNES LTD. TOWER HOUSE, SOUTHAMPTON STREET, LONDON WC2 Temple Bar 4363.





← THIS

... is the fabulous Regula SPRINTY B—a star of the SPRINT family of cameras.

The SPRINTY B is a fast selling camera with built-in exposure meter for only £13. 19. 9. Other Regula cameras are the Sprinty at £6. 19. 9., the Sprinty II at £7. 19. 9., the Regulette 125 at £9. 19. 9., the Sprint 'S' at £10. 9. 9., and the terrific new Regula Rapid SL at only £11. 19. 9. All are quick turnover, top quality, 35 mm cameras. Write for complete details today:-

For details write:

DEPT. R185

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London Showroom: 21 Noel Street, off Wardour Street, W.1



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C. & D.
29/8

Salesmaster

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THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

THE WEEKLY NEWSPAPER FOR PHARMACY
and all sections of the drug, pharmaceutical,
fine chemical, cosmetic, and allied industries

*Official organ of the Pharmaceutical Society of Ireland
and of the Pharmaceutical Society of Northern Ireland*

Volume 182

August 29, 1964

No. 4411

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MORGAN BROTHERS (PUBLISHERS), LTD.,
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Telephone: Central 6565

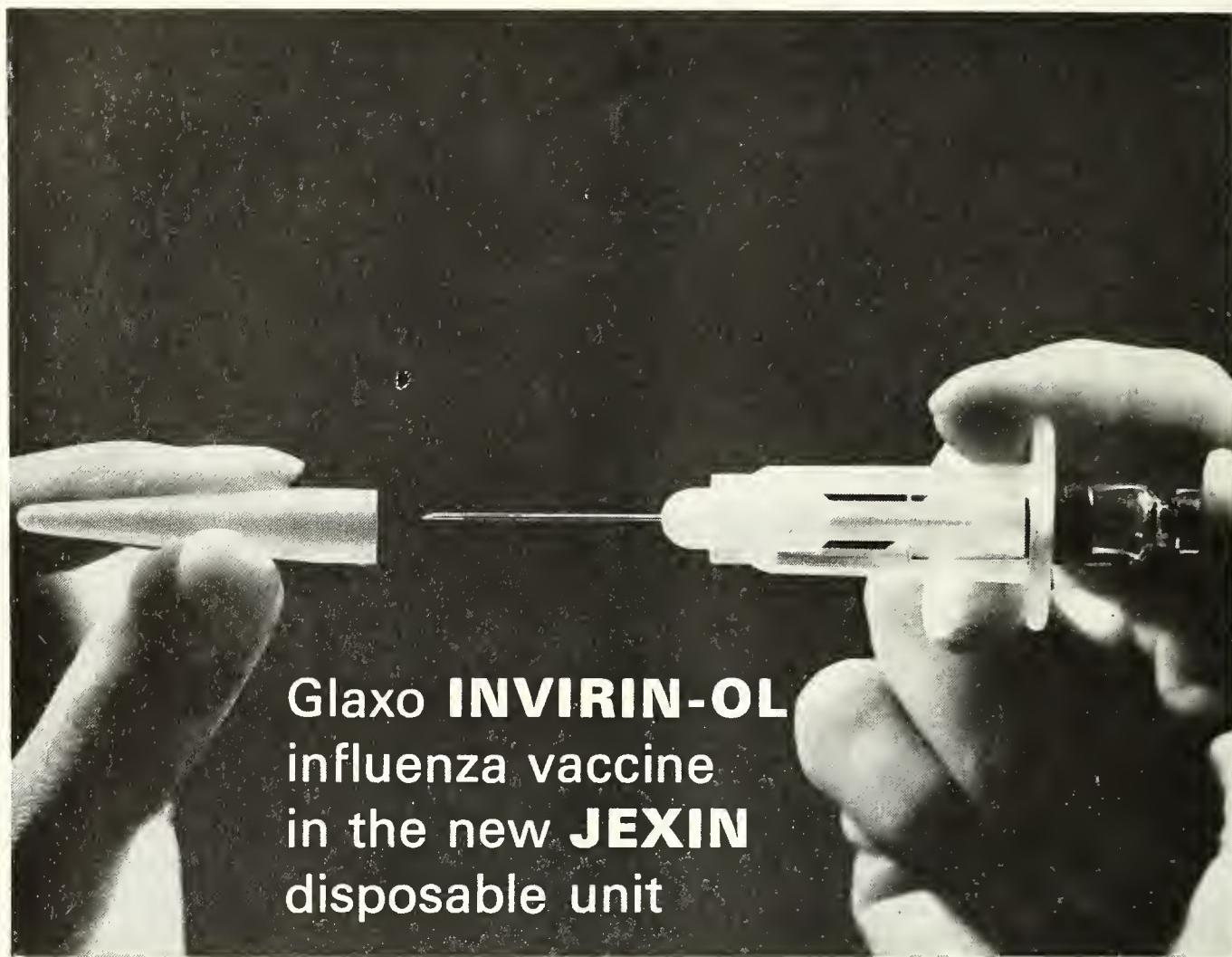
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MORGAN BROTHERS (PUBLISHERS), LTD. 1964

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LEEDS, 16: 32 Wynford Rise, West Park. Phone: Leeds 67 8438.

ANNUAL SUBSCRIPTION

which includes The Chemist and Druggist Diary and Year Book, £3 10s. Single copies 1s. 3d. each (postage 5d.).



Glaxo INVIRIN-OL influenza vaccine in the new JEXIN disposable unit

INVIRIN-OL, the latest oil-adjuvant influenza vaccine is dispensed in the new JEXIN disposable unit. This completely sterile unit consists of a ready-assembled syringe, loaded with one dose of INVIRIN-OL. The unit is simple to use—twist the central barrel to break the seal, remove cap, inject and then throw away. In this time saving manner vaccination sessions end sooner and are less tiring, at no extra cost.

The vaccine itself is the oil-adjuvant type that has been shown to be the influenza vaccine of choice. A high antibody response is produced after two to three weeks; and with a small 0·25 ml dose, the chance of reaction is minimal. Four strains of killed virus are included:

A/Singapore/1/57, A/England/1/61, B/England/939/59, and
B/Taiwan/4/62.

INVIRIN-OL, like all Glaxo vaccines, is backed by twenty-eight years of human vaccine research and development.

Presentation: Boxes of 10 x 1-dose disposable syringe packs



Glaxo Laboratories Ltd Invirin-ol and Jexin are Glaxo Trade marks



The CHEMIST AND DRUGGIST

Volume 182

AUGUST 29, 1964

No. 4411

Cut Price Toiletries CAMPAIGN IN WOOLWORTH STORES

CUT prices over a wide range of cosmetics and toiletries were introduced by F. W. Woolworth & Co., Ltd., on August 24, when posters drawing attention to the changes appeared on windows of the company's branches.

Most cuts seem to have been made on products of Beecham Toiletry Division and Chesebrough-Ponds, Ltd., many other apparent reductions being in fact manufacturers' own "special offers." Among prices noted in some of the company's London stores on August 25 (usual prices in parentheses) were:—Angel Face eye shadow compact, 1s. 5d. (1s. 9d.); eye pencil, 1s. 9d. (2s. 3d.); liquid make-up, 3s. (3s. 8d.); powder compact, 3s. (2s. 9d.); Curl 'n' Comb, 4s. (5s.); refill, 2s. (2s. 6d.); Body Mist spray, 2s. 11d. (3s. 6d.); Bristow's: cream shampoo, 2s. 7d. (3s.); liquid shampoo mini-bottle, 8d. (10d.); Brylcreem tubs: 1s. 5d. (1s. 11d.); 2s. 2d. (2s. 11d. with 5d. off offer); 4s. 3d. (5s. 6d. with 6d. off offer). Cutex: cuticle remover, 2s. (2s. 5d.); nail polish, 1s. 11d. (2s. 5d.); pearl polish, 3s. (3s. 9d.); polish remover, 2s. (2s. 5d.); strong nail, 3s. 6d. (3s. 9d.). Diana Marsh: talc, 1s. 3d. (1s. 6d.). L'Onglex: nail polish, 1s. 2d. (1s. 6d.); polish remover, 1s. 2d. (1s. 6d.). Nivea creme: 1s. 3d. (1s. 8d.); 2s. 2d. (2s. 9d.). Palmolive soap, 7d. (10d.). Ponds: cold and vanishing creams, 1s. 6d. (1s. 11d.); face powder, 1s. 3d. (1s. 7d.); lipstick, 1s. 3d. (1s. 7d.); talcum Dreamflower, 1s. 7d. (2s.); Signal tooth-paste, 1s. 4d. (2s. 4d. with 3d. off offer). Silvikrin: hair cream, 1s. 6d. (2s. 1d.); 2s. 6d. (3s. 2d.); Steradent: 1s. 3d. (1s. 8d.); 3s. 11d. (4s. 2d.); tablets, 1s. 8d. (2s.); 2s. 6d. (2s. 10d.). Vosene: sachet, 7d. (8d.); 1s. 9d. (2s. 4d.).

Mr. C. C. Green (deputy secretary, Proprietary Articles Trade Association), when approached, said he did not expect Messrs. Woolworth's move to result in drawing pharmacies into a cut-price war. A paragraph in the *Daily Telegraph* on August 26 announced that chemists "are considering stopping their sales of toilet articles," while a spokesman for Boots, Ltd., told the *Financial Times* that the company's price policy was "under careful consideration" in view of the Woolworth's decision.

N.H.S. Clerical Staffs

AGREEMENT ON SALARIES

THE Minister of Health has distributed to Executive Councils, the Joint Pricing Committee and the Dental Estimates Board, copies of A.C. Circular No. 112 which sets out an agreement of the Administrative and Clerical Staffs Whitley Council relating to the salaries of certain administrative and clerical staff in the National Health Service. The

Council has agreed that the salary scales of the general and designated grades and storekeeper clerks shall be increased by 3½ per cent. with effect from July 1. The Council is to review the salaries of those grades by reference to the duties of each grade and to the remuneration for comparable duties elsewhere "by such methods as the Council may determine." If the review is not completed by July 1, 1965, or within two months after that date the salaries are to be increased by 3½ per cent. on July 1, 1965. The new salary scales effective immediately listed in the circular include designated grades for the Joint Pricing Committees and the Drug Accounts Committee (Scotland). They are:—

Joint Pricing Committee for England:

Clerk £2,047 x £86 (2) x £87 (1) x £115 (1)
x £116 (1)—£2,537.

Deputy clerk £1,424 x £57 (1) x £58 (2) x £81 (1) x £79 (1)—£1,757.

Superintendents of pricing bureaux £1,366 x £47 (1) x £57 (1) x £58 (2) x £57 (1)—£1,643.

Welsh Joint Committee:

Clerk superintendent £1,470 x £58 (2) x £57 (1) x £58 (1) x £56 (1)—£1,757.

Drug Accounts Committee (Scotland):

Clerk superintendent £1,614 x £58 (1) x £57 (2) x £59 (1) x £58 (1)—£1,903.

Superintendent £1,366 x £47 (1) x £57 (1) x £58 (2) x £57 (1)—£1,643.

Contractor Reprimanded

DEFICIENCY IN A DISPENSED MEDICINE

THE Minister of Health has approved a decision by Dorset Executive Council to reprimand a contracting company and to take an additional test at the company's pharmacy. A test prescription for phenol and alkali mouthwash dispensed at the company's pharmacy had been found deficient in potassium hydroxide solution. In deciding on the recommendation the Executive Council's pharmaceutical service committee took note of comments by its professional members on the possibility that potassium hydroxide solution might deteriorate on storage owing to its property of absorbing moisture and carbon dioxide from the atmosphere, and of the difficulty of obtaining commercially small quantities of the solution.

First-aid Provisions

FACTORY REQUIREMENTS

FIRST-AID provisions in offices and shops in factories and in offices in electrical stations and on construction sites are dealt with in three sets of regulations made by the Minister of Labour on August 24. They are The Offices and Shops in Factories (First Aid) Regulations, 1964; The Offices in Electrical Stations (First Aid) Regulations, 1964; The Offices at Building Operations, Etc. (First Aid) Regulations, 1964 (H.M. Stationery Office, price threepence each). The first two statutory instruments provide that the first-aid provisions of the Factories Act instead of those of the Offices, Shops and Railway Premises Act will apply to offices and shops in factories and offices in electrical stations. The employer must take account of the number of office workers, as well as the number of factory workers, in reckoning what first-aid boxes he must provide and whether he must provide a trained first-aider. For the latter purpose, however, the regulations provide that three office workers shall count as one; that is because the



PORTRAIT OF A COMPANY PRESIDENT : A new portrait of Sir William Cooper, Bt., formerly of Cooper, McDougall & Robertson, Ltd., and now the company's president, is given its final adjustment by Captain R. Oliver-Bellasis (secretary, Cooper Technical Bureau). The portrait, commissioned by the company's directors, was unveiled in the presence of Sir William at a small gathering of senior staff of the company recently. It now hangs in the conference room of the Cooper research station at Berkhamsted Hill, Herts. It was painted by Howard Barron.

Factories Act requires a trained first-aider in all factories in which more than fifty persons are employed, whereas in offices and shops (because of the lower risks) a trained first-aider is required only where there are more than 150 employees. The third instrument deals with offices on construction sites: it excludes them from all the first-aid provisions of the Offices, Shops and Railway Premises Act 1963 and provides that they may be covered by the first-aid provisions of regulations made under the Factories Act covering such sites. Present regulations do not apply to office workers but provision for them is made in a statutory draft, The Construction (Health and Welfare) Regulations, 1964, published on August 21. The purpose of all the regulations, which come into force on December 1 is to avoid unnecessary duplication of first-aid facilities while assuring office workers in those premises facilities at least equal to those for similar workers elsewhere.

Hydrocarbons in Foods

A CHANGE IN THE REGULATIONS

THE Minister of Agriculture, Fisheries and Food, acting jointly with the Minister of Health, has prohibited the use of mineral hydrocarbons in food unless they are specifically allowed by regulation. The Mineral Hydrocarbons in Food Regulations, 1964 (H.M. Stationery Office, price eightpence), which revoke and replace previous Mineral Oil

in Food Orders, come into force immediately but there will be a six-month period of grace during which the earlier regulations may be complied with where they are less strict than the new ones. Corresponding regulations to apply in Scotland and Northern Ireland are being made.

Chemists' Retail Sales

BOARD OF TRADE STATISTICS

FIGURES recently issued by the Board of Trade for June reveal the following changes in the sales of chemists' goods:—

	Compared with May 1964 %	Compared with June 1963 %
Independent retailers	+5.5	+3.6
Multiple retailers	-4.3	+1.9
Co-operative Societies	-1.9	+4.0

The figures do not allow for receipts under the National Health Service.

Agricultural Chemicals

ADDITION TO APPROVED PRODUCTS

THE Agricultural Departments of the United Kingdom announce that the following product has been approved under the Agricultural Chemicals Approval Scheme.

Fungicides

TECNAZENE (TCNB) FUNGICIDE SMOKE. For the treatment of botrytis on tomatoes, chrysanthemums, indoor lettuce and ornamentals under glass. Fumite TCNB smoke pellets and generators (Waeco, Ltd., High Post, Salisbury, Wilts).

N.P.U. REPLIES TO "THE PEOPLE"

"An unwarranted slur on pharmacists"

THE secretary of the National Pharmaceutical Union (Mr. J. Wright) has protested vigorously to the Editor of *The People* about a story published on that paper's front page on August 23 under the banner headline "Millions Lost in Drug Scandal."

Mr. Wright's letter describes the article as a "completely unwarranted slur on the profession." It is quite untrue, he writes, that £ millions a year are being lost to the taxpayer and the suggestion by Dr. Solomon that a sum of £39 millions a year would be saved if all medicines were bought from non-brand manufacturers is patently absurd. That would have been evident to the Editor of *The People* if he had referred to the annual report of the Ministry of Health published during July.

Medicines ordered by brand must be supplied by the pharmacist according to the brand prescribed. Orders for drugs by non-proprietary names which the pharmacist could quite properly fill with any non-brand item complying with appropriate standards, accounted for only about £6 millions a year (table 13, Annual Report, Ministry of Health, 1963: Cmd. 2389). Had all those drugs been bought from "pirate" sources the saving would have been £2 to £3 millions.

Dr. Solomon's other suggestion—that pharmacists are making fantastic profits is also absurd. "The Minister of Health has recently agreed to increase the remuneration for N.H.S. dispensing by about £6 millions a year. He did this after an investigation carried out over

two years by independent consultants, during which the financial structure of a representative sample of pharmacists was subjected to the closest scrutiny. There was, in addition, an inquiry into the prices paid by chemists for medicines supplied under the National Health Service and the settlement reached with the Minister is such that the amount paid to chemists will, on average, reflect the prices actually paid by them for medicines. The settlement provided for a profit margin of only 5½d. per prescription. If that figure is fantastic it is, I suggest, fantastically small."

The number of pharmacists buying from Dr. Solomon's company and similar sources, states Mr. Wright, is quite obviously small, as evidenced by the cut-throat terms that Dr. Solomon and his competitors in this pirate market have been offering, and by the fact that they have bombarded chemists with literature and special offers. "Are these the tactics of men who are succeeding in selling to any number of chemists? Those who advocate the supply of pirate drugs are apparently blind to the long-term effects on the country of any widespread use of such drugs. Research in the pharmaceutical industry will inevitably be brought to a halt. The export of pharmaceuticals from this country will undoubtedly suffer. The closing down of retail pharmacies in the country—now at the rate of about 100 a year—will be accelerated. This is clearly not in the interest of readers of *The People* or the public generally."

Statutory Committee

MEMBERS FOR THE NEXT FIVE YEARS

THE Council of the Pharmaceutical Society of Great Britain announced during the past week that, for the five-year period that began on July 4 they have appointed Messrs. C. G. Drummond, T. Heseltine, C. W. Maples Thorpe, A. C. Pearce and W. J. Tristram to be members of the Statutory Committee.

IRISH BREVITIES

THE REPUBLIC

PHARMACISTS in the Dublin and Dun Laoghaire area are being asked to be on the look-out for a woman, believed to be an addict, purchasing excessive quantities of Welldorm. She is stated to be in her mid-twenties, with fair hair. Slightly built and of medium height, she is described as well dressed, and well spoken.

OVERSEAS NEWS

WEST GERMANY

Sales Growth of Toiletries

FOLLOWING the favourable development of sales during the first few months of the current year production of toilet articles and cosmetics in Western Germany is expected to reach a total of more than DM1,000 millions for the whole year. In 1963 production totalled DM916 millions compared with DM864 millions in 1962. In the last ten years production of toilet articles in Western Germany has more than trebled. The toilet articles industry estimates that expenditure on toilet articles last year amounted to DM30 to 32 (53s. 3d. to 56s. 9d.) per head of the population. For some years products for care and treatment of the hair have shown an above-average rise in production and last year reached a production value of DM257 millions. That group of products was by far the biggest branch of cosmetics and their expansion was largely due to the practical sprays sold in pressurised containers. Remarkable, too, was the increased consumption of hair oils and brillianties which were especially popular among foreign workers in Germany. Second position in the cosmetics group was taken last year by the perfumed and toilet waters on an alcoholic basis, including eau-de-Cologne and lavender water, mouth washes and shaving lotions, with a production volume of DM208 millions. Third place was taken by products used for the care of the skin for which an increase in production from DM64 to DM195 millions was recorded during the decade from 1954 to 1963. The production of dental toilet requisites last year totalled DM105 millions. Growing imports should be taken into account in the production of perfumes to a value of about DM13 millions in 1963. Production of powders (excluding medical powders) reached a total of about DM16 millions in 1963. The biggest suppliers of cosmetics to Germany last year were: France, DM16·9 millions; Great Britain, DM7 millions; Holland, DM3·9 millions; U.S.A., DM3·3 millions; and Switzerland, DM3·1 millions.

NEWS IN BRIEF

MR. W. H. Whyte, M.P.S., was secretary of Colchester and District Association of Pharmaceutical Chemists and not as recently stated. The Association was formed in 1840—one year earlier than the Pharmaceutical Society.

THE Industrial Court has awarded salary increases of between 3 and 14 per cent. to chiropodists, occupational therapists, physiotherapists, remedial gymnasts and therapeutic dieticians employed by the National Health Service.

IN order to minimise language hindrances to co-operation on a European level, the European Federation of Corrosion has authorised the preparation of a terminology of corrosion in the German, English and French languages. Equivalent terminology and expressions are being summarised and explained. The work of preparing the terminology is expected to take several years to complete.

THE National Association of Women Pharmacists' September *News Letter* reminds members that 1965 is the Association's diamond jubilee year. Suggestions for suitable celebrations would be welcomed by the national council. Notice is given of a sherry party to be held at the Royal hotel, Edinburgh, on September 17 (during the British Pharmaceutical Conference) when a presentation will be made to Miss O. W. Scarlett who recently resigned from the posts of treasurer (which she held for ten years) and vice-president.

Courses and Conferences

"PACKAGING at Speed" is the subject of the fifth conference of the Institute of Packaging, Eastbourne, Sussex, October 21–24. Details are obtainable from the Institute, Malcolm House, Empire Way, Wembley, Middlesex.

A CONFERENCE of British house journal editors, organised by the Industrial Welfare Society, 48 Bryanston Square, London, W.1, is being held at the Bourne Hall hotel, Bournemouth, Hants, October 23–26.

THE Department of Banking and Commerce, City of London College, Moorgate, London, E.C.2, is holding a two-term course, commencing October 3, in export practice. The syllabus covers the elements of international trade, methods of sale, packing and shipping, documentation, customs procedure, export finance, legal aspects and marine insurance. For students under twenty-one on September 1 there is no fee. For other students resident in the administrative county of London and certain other areas the fee is 50s.

SPORT**Golf**

IRISH CHEMISTS' GOLFING SOCIETY. Forty-five members competed for prizes donated by Gillespie & Co., Ltd., at the Hermitage, on August 20. Mr. A. B. Hensey, the company's managing director, presented the prizes. *Results:* Bogey competition, 1, W. J. Dalton (11), 2 up; 2, J. Burke (9), all square. (Mr. Dalton is president of the Irish Drug Association). Stroke competition, 1, J. Power (11), 69; 2, P. Fullam (15), 71. Best score on first nine holes, A. Gleeson. Best score on second nine holes, F. O'Reilly. Best gross score, J. Glynn. Next outing—Clontarf, September 16.

TOPICAL REFLECTIONS

By Xrayser

Proud day

The appearance of lists of successful candidates in pharmaceutical examinations (p. 164) recalls the pride I felt on seeing, many years ago, my own name in similar company. There were no complications of a, b, c, d, at that time, nor was there any question of being an internal or external student, but I fancy that the same feeling of pride, of relief, of hopes for the future, will arise in the recently successful as in those who received a congratulatory handshake from the chairman of the board of examiners—how many years ago? And a few questions inevitably form themselves in my mind. Were my prospects brighter in that far-off day than they would be at the present time? Is today's newly qualified to be envied? Is he stepping off into a better pharmaceutical world than I did? Will he be able to raise the standard of pharmacy to a higher level than that in which he now takes his place? Have I, and my generation, had any success in that direction, or have we utterly and completely failed? There have been opportunities. Have they been grasped as they ought to have been? As I reflect, I remember only too clearly that the fierce pride ebbed fairly quickly, for a period of economic depression had set in and the opportunity to make use of the skill and knowledge guaranteed by my certificate was not immediately forthcoming. For the few vacancies that occurred there were a distressingly large number of applicants. Disappointments were many—letters of application were unanswered, and personal interviews unfruitful. The salaries offered were not what one had hoped for on the proud day referred to above, and the applicant quickly felt that worldly success was to be measured not in terms of money but in securing employment of any kind. I had better luck than some, for my employment was pharmaceutical. Some canvassed non-pharmaceuticals from house to house.

Raise the standards

If one of the fortunate ones—securing employment at a salary of £180 per annum—the young pharmacist found that he was not launched on a course that gave him a great deal of leisure to pursue other interests, for his working day from 9 a.m. to 8 p.m. on ordinary week-days, and a full round of the clock on Saturdays. Even the statutory half-holiday had its disadvantages, for there was an evening attendance from 6 to 8 p.m., while the traditional day of rest involved no fewer than three spells of opening. (I remember being told by my seniors how much better my conditions were than theirs of twenty years earlier, when working hours were longer and there was no half-day.) There was then, of course, no National Health Service. There was National Health Insurance, which covered a limited section of working people but not their dependents. That brought some dispensing into the pharmacy, even if the value of the pharmacist's professional services for each operation was the same as the lowest bus fare today. The wives and families of the insured got their medicine from the doctor's surgery on payment of a consultation fee. Where does the newly qualified stand today? He has a good qualification. He is assured of immediate employment, in any one of a number of fields, with rewards undreamed of between the wars. Various acts of Parliament have recognised his qualification, and his official status is higher than it was when I first appeared in the ranks of the newly qualified. Why, then, does modern pharmacy persist in showing such a poor photograph of itself as is seen in so many places? Why the display of necklaces and earrings, and now, it appears, nylon stockings? The taxpayer may want to know one day why he should be called upon to subsidise heavily the academic pharmaceutical studies of a shopkeeper who wants to sell nylons. Let the new arrivals dedicate themselves to making pharmacy a profession worthy of the high qualification acquired after long study and effort.

Funny chemist

Prospective customer: Do you sell cheese?

Chemist: I am sorry, no.

Prospective customer: What a funny chemist!

Future Pattern of Man-power

A MINISTRY OF LABOUR REPORT

BETWEEN 1963 and 1968 the working population of the United Kingdom will be increasing more slowly than in recent years, while employment is expected to grow in both the manufacturing and services sectors, offset to some extent by a continued net decline in the rest of the economy. Total man-power resources are likely, therefore, to be no more than adequate during the period. In the next following five years up to 1973 the growth of the working population is again expected to slow down substantially, and the strain on man-power resources may well be even more severe.

Those are the main conclusions of the first report of the Ministry of Labour's Man-power Research Unit, "The Pattern of the Future" (H.M. Stationery Office, price 4s. 6d.). Purpose of the report is to sketch in the pattern of employment in the United Kingdom as it has been developing during the past decade and as it is likely to develop in the foreseeable future. The study is essentially one of total man-power resources at national level and their future distribution, the aim being to give a broad assessment of the main trends in employment.

The report states that during the next five years the total man-power resources will be no more than adequate to meet the needs of an expand-

ing economy and the efficient and flexible use of man-power will continue to be of the greatest importance. Employment opportunities for women may expand slightly more quickly than for men, and employers will need increasingly to encourage part-time working and to facilitate the employment of married women. Over a longer term, efficient use of man-power will become even more essential. The development of automation and any other methods whereby productivity can be raised will assume increasing importance. There is reference to a falling-off in the number of young people entering the labour market, accentuated by the raising of the school leaving age in 1970, that will call for adjustments, especially as they will make for a less adaptable labour force. Some types of work at present performed mainly by young people may need to be reallocated.

After a survey of the main industrial groups the report refers to significant changes of trend in some industries. Employment in chemicals, for example, which has been on a rising trend over the past ten years, may tend to level off, although the upward trend in employment in pharmaceutical and toilet preparations industries will probably continue.

A review of trends in the services sector indicates that in most cases em-

ployment is likely to continue to rise rapidly. The largest increases are expected in health and education services and in distribution—in the latter case representing some slowing-down of growth rate. Marked increases are also expected in certain miscellaneous services, such as hairdressing.

The report refers to the decline in the number of family businesses and the increase in the proportion of business handled by multiple undertakings. Between 1957 and 1961 sales of self-service and supermarkets increased by 150 per cent. whilst sales by mail order businesses nearly doubled. Manufacturers' sales direct to the public increased but were only a small fraction of the total sales. The research unit considers these trends were likely to continue and in certain trades may become even more marked. "Their general effect is to increase the volume of sales per person engaged. This is . . . likely to be more than matched by the increase in the total volume of business, implying a continued increased in this large sector of employment particularly for women."

In view of its major importance and "the many uncertainties in the available data," the subject of employment trends in distribution has been selected for special study by the Manpower Research Unit.

The Industry as Seen by Doctors and the Public

SECOND SURVEY FOR THE A.B.P.I.

A SECOND survey aimed at gauging the extent of knowledge of the pharmaceutical industry among doctors and the public has been completed for the Association of the British Pharmaceutical Industry. The first was in 1962.

The general practitioners were questioned on how important they thought was the part played by new drugs in the medical advances of recent years. In 1964, the proportion of doctors who held drugs to have been of great importance was higher than in 1962. A contrary view was rather commoner among the younger doctors.

The number of doctors who knew who was responsible for research showed a much more encouraging increase. 79 per cent. of practitioners in 1964 acknowledged the industry's predominant rôle in research, against 59 per cent. in 1962. It would appear that the educational propaganda of the Association of the British Pharmaceutical Industry has achieved some success, since the 21 per cent. of "don't knows" in 1962 dropped to 6 per cent. in 1964.

Britain was again considered by about half of the informants to be behind other countries in the development of new drugs, but most could offer no specific examples upon which to base their opinions. America was the coun-

try most often quoted as more advanced than Britain, mainly because her resources were bigger and because more money was being spent on research. 10 per cent. gave their reason as the emigration of British scientists.

Doctors showed themselves the better informed on the proportion of the National Health Service expenditure devoted to drugs. 66 per cent. put the figure at less than £20 in every £100 while 40 per cent. of the general public thought it to be over £30 in every £100. A majority in both groups believed that the proportion was increasing, but the view was not so strongly held among doctors under forty-five.

A large proportion of both groups felt that there would be a serious outcome if a reduction in profit were to cut down the development of new drugs. In the current survey about half of each group felt that a reduction in profits would have such an effect.

Asked whether they thought that the interests of medicine and the patient would be better served by the nationalisation of the pharmaceutical industry, 84 per cent. of practitioners said "No."

In view of the publicity surrounding the thalidomide tragedy in 1962, and the setting up of the Dunlop Committee on the Safety of Drugs in 1963, both general practitioners and the pub-

lic were asked a new question concerning drug safety in 1964. The answers suggested no lack of confidence amongst either general practitioners or the general public.

Practitioners named articles in medical journals as their main source of information, manufacturers' representatives and discussions with colleagues being the next two most frequently mentioned. Only 1 per cent. seemed to make use of discussion with pharmacists, against 11 per cent. in 1962. One new source named in 1964 was *Mims*. Two-thirds of the practitioners questioned reported that they found product samples useful, the commonest reason being that samples could be used as "emergency" supplies. Only one in three doctors were aware of the existence of the A.B.P.I.'s "code of marketing practice."

N.H.S. STATISTICS

In DORSET during 1963, 1,258,990 prescriptions were dispensed at an average cost of 9s. 6d. per prescription. The cost of the N.H.S. amounted to £4 15s. 7½d. per head of the population of which £1 16s. 4½d. was for general medical services and £1 15s. 6½d. for pharmaceutical services. Dental services amounted to 18s. 1d., ophthalmic services 4s. and administration 1s. 7½d.

Recruitment in Hospital Pharmacy

STATEMENTS BY GUILD AND TEACHING HOSPITAL ASSOCIATION

THE president of the Guild of Public Pharmacists (Mr. E. J. Fitchett), has issued the following statement concerning the present situation in hospital pharmacy:—

The Council of the Guild of Public Pharmacists is conscious and appreciative of the effort of the national Press in bringing to public notice the dire straits in which hospital pharmacy finds itself, and wishes to emphasise the truth of the facts made public.

Since 1948 (on the take-over of the hospital services by the National Health Service) the Council has been saying repeatedly that the contribution of the pharmacist to the Hospital Service has been inadequately recognised; that because of this, his status, responsibilities and salary for the duties undertaken have, in terms of real money and in comparison with his colleagues in other fields, been slowly whittled away. Management has been unaware of, or conveniently put aside, the place of the pharmacist. The tripartite concept of administration of the service has been considerably strengthened by the various committees appointed to enquire into administration. In the absence of a recognised place for pharmacy, the pharmacist has found himself classed with lay staff and unless he has fought the lone battle for recognition within his committee, he has remained, faithfully providing a service often in cramped, over-crowded and unsuitable premises with little say in how things should be managed.

The Council has been telling the responsible officials that this state of affairs cannot continue, that the pharmacist must be recognised as a professional man in his own right, that he has a part to play in administration and management, and must be the arbiter in all matters affecting the pharmaceutical service. Coupled with these facts must inevitably be the question of salary. The hospital pharmacist is grossly underpaid considering the duties and responsibilities for which his training has fitted him.

Culmination of Accumulating Troubles

The shortage of hospital pharmacists currently brought to public attention by the national Press is the culmination of all the "troubles" that have beset hospital pharmacy since the appointed day. The Council has no doubt that unless, and until the hospital pharmacist is properly and fully recognised as a separate entity, with full representation on all the bodies concerned and has a salary structure commensurate with his responsibilities, there will be no improvement in the situation.

The Council will continue to seek to improve this state of affairs by all means within its power so that the future of the pharmaceutical service as a vital part of the whole, is assured. Action is needed now and the Council would urge all those who are concerned with the efficiency of the hospital service to use their efforts to make known their anxieties concerning continued inadequate recruitment.

The secretary of the Association of Teaching Hospital Pharmacists (Mr. J. B. Lloyd) has sent the following letter on behalf of the Association to

The Editors of *The Guardian*, *The Times*, *Daily Telegraph*, *Daily Express* and *Daily Mail*:—

The Association of Teaching Hospital Pharmacists, a body composed of the chief pharmacists of the undergraduate teaching hospitals in England and Wales, has for some considerable time been gravely concerned about recruitment into the hospital pharmaceutical service. The Association plays no part in the negotiation of salaries and is, in fact, prevented by its constitution from considering or making representations regarding the terms and conditions of service of its members. It is, however, very properly concerned with the maintenance of an efficient pharmaceutical service in the teaching hospitals and in June of this year a communication was sent to the Minister to point out that the staffing position had deteriorated to such an extent that in the London teaching hospitals alone forty out of sixty-eight posts in the basic grade were vacant and that a crisis was imminent. In the provinces the situation was little better. Nothing more than a formal acknowledgment was received but subsequent events have provided ample proof that the gravity of the position had not been overstated. A number of well-known hospitals which not so long ago were regarded as the training grounds for pharmacists who had set their sights on the top posts, have been forced to withdraw, or greatly curtail, out-patient dispensing services because of shortage of staff. This aspect of the problem has received widespread publicity and questions have been put to the Minister in the House of Commons. His replies have, to say the least, been evasive and tend to give an entirely false impression of the serious difficulties which now face the hospital pharmaceutical service.

The pharmaceutical department of a large and active general hospital may employ a staff of twenty and upwards. Some of them will be pharmacists, the others dispensing assistants, clerks, storekeepers, etc. The dispensing of out-patient prescriptions usually forms only a minor part of the total work-load of the department and the major effort is devoted to dealing with the requirements of inpatients. This involves not only the dispensing of prescriptions but the development of specialised forms of medication to meet the particular needs of patients

who are critically ill. The work of the department is organised and allocated amongst the staff according to qualifications and experience by the chief pharmacist, who carries considerable executive responsibility. He is responsible for expenditure which may amount to £100,000 or more per annum; he must not only make sure that drugs are available when needed but satisfy himself of their quality. Most important of all, as head of a department engaged in work where human error can have the most appalling consequences, he must do his utmost to ensure that his staff work in an atmosphere where errors are least likely to occur.

Increasing Difficulties

For the last few years he has faced increasing difficulties in providing such conditions. Hospital pharmacy has already accepted a high degree of dilution with dispensing assistants and in fact it has taken the initiative in providing in-service training facilities. Today the pharmacists required to train them and supervise their work are no longer forthcoming. The hospital service has become increasingly unattractive to young graduates and in the last ten years there has been an almost total failure to recruit men into it. The cause is the present differential of £300-£350 p.a. between commencing salaries in hospital and those paid in what is virtually the private enterprise sector of the Health Service. More important still is the almost complete lack of career prospects. In these circumstances the chief pharmacist has no alternative but to recommend his governing body to shed part of the load. Out-patient dispensing facilities are most easily withdrawn, albeit not without considerable inconvenience to patients and a greatly increased cost to the taxpayer. If the situation deteriorates further, and available evidence indicates that it will do so, the position will become extremely grave. There are no easy alternatives for dealing with the requirements of inpatients and the closing of beds must be the inevitable result. The Association has used all means within its power to ensure that the Minister is fully aware of the position. It would welcome and do all it could to facilitate an independent enquiry into the hospital pharmaceutical service, to the building up of which many of its members have devoted the best part of a lifetime.



LONG-SERVICE PRESENTATIONS : Mr. W. J. Peploe (fifty years' service with The British Drug Houses, Ltd.) and Miss B. Hawes (forty-five years' service) photographed with Mr. F. W. Griffin (managing director) after receiving long-service presentations in the form of Premium Bonds.

COMPANY NEWS

Previous year's figures in parentheses

DUNBEE-COMBEX, LTD. — The company have entered into a contract to acquire all the issued Ordinary and 5 per cent. non-cumulative Preference shares of L. Rees group of companies among which is Isovac, Ltd.

BORAX (HOLDINGS), LTD. — Trading surplus for nine months ended June 30 were £6,509,000 (against £5,076,000 for the same period of 1963). Profit before taxation was £4,165,000 (£3,039,000), less taxation, £1,783,000 (£1,194,000).

FARBEWERKE HOECHST, AG. — Turnover rose by 17 per cent., or DM360 millions, during the first seven months of the year over the corresponding period of 1963, the company reports. Capacity is being fully utilised in all sectors. Profits, too, developed satisfactorily. Prices for most products have stabilised, except for plastics and synthetic fibres where the pressure on prices continues. The whole of the investments planned for 1964 are being realised. Chemische Werke Albert, which Hoechst took over recently, increased its turnover 11·4 per cent. in the first seven months of the year.

PHOTOPIA INTERNATIONAL, LTD. — With an unchanged final dividend of 13½ per cent., the total for the year to April 30 is maintained at 17½ per cent. Notwithstanding increased turnover, the increase in overheads resulted in a slightly lower profit. The directors state that uncertainties in the minds of dealer customers of the effects of the resale price maintenance legislation, and "direct-selling" competition, which led to some loss of turnover in the latter part of the year, "are now largely behind us," and turnover for the first three months of the current year is running at approximately the same rate as in the same period last year. Group trading profit was £140,059 (£140,178). Profit, before tax, attributable to the holding company was £120,473 (£123,166). After taking account of the share of a subsidiary's initial development loss attributable to outside interests of £2,788, the group profit before tax was £117,685. Tax takes £67,750 (same), leaving a net profit of £49,935 (£55,666), and the holding company's balance, including the loss attributable to the outside interest, is £52,723.

BUSINESS CHANGES

DR. D'S PRODUCTS, LTD., have removed to 17 Elms Avenue, London, N.10 (telephone: Tudor 9326).

THE pharmaceuticals division of Imperial Chemical Industries, Ltd., announces that the northern region sales department is being transferred to Alderley House, Alderley Park, Macclesfield, Cheshire (telephone: Alderley Edge 2828). Orders and inquiries should be sent to that address as from September 4.

THE pharmacy of Tomlinson & French, Ltd., 35 Market Parade, Havant, Hants, has been acquired by Mr. W. F. Cocker, M.P.S., who will

trade as Wm. F. Cocker, M.P.S., as from September 1. Communications for former owners to: Mr. G. W. Tomlinson, M.P.S., 197 Cell Barnes Lane, St. Albans, Herts.

Appointments

SMITH KLINE & FRENCH LABORATORIES, LTD., Welwyn Garden City, Herts, have appointed Mr. P. A. L. Barnes their overseas development manager. Mr. Barnes was formerly the company's personnel manager.

PERSONALITIES

MR. R. J. OSWALD, M.P.S., who has been appointed a director of Pharmaceutical Specialities (May & Baker), Ltd., joined the M&B group of companies as a representative in 1936. Later he went to West Africa and became the first director and general manager of May & Baker (West Africa), Ltd. In 1946 he was appointed general manager of May & Baker's South African company. He returned to the United Kingdom in 1958 and was appointed medical sales manager of Pharmaceutical Specialities (May & Baker), Ltd., in 1962.

MR. A. C. PEARCE, M.P.S., who has been appointed to the Statutory



Committee (see p. 186) is London area director of Boots, Ltd., and in charge, therefore, of about 400 shops in London and the south of England. Educated at Tottenham Grammar School, he joined the company as an apprentice at Bond Street, London, branch, and qualified in 1937 after attending Chelsea Polytechnic. He was commissioned in the Royal Navy during the 1939-45 war and on rejoining the company had wide experience as a branch manager before being appointed territorial general manager for the Manchester area in 1953, followed by a term in a similar capacity in the Bristol area.

MR. T. B. CHADWICK, M.P.S., who has been for the past sixteen years advertisement manager of the *Pharmaceutical Journal*, is retiring on September 30. Mr. Chadwick was formerly a representative in the North of England for THE CHEMIST AND DRUGGIST (for part of the time he was in charge of the paper's Manchester office). He left the C. & D. for a time during the 1939-45 war to join the administrative staff of

the National Pharmaceutical Union, later rejoining the C. & D. as assistant to the Publisher.

Mr. David Bailey, who succeeds Mr. Chadwick as advertisement manager of the *Journal*, joined the staff as deputy advertisement manager in May. He was formerly a member of the advertisement department of the *Sunday Dispatch*, and since 1962 he has been on the advertisement sales staff of the International Publishing Corporation.

DEATHS

ADAM. — On August 21, Mr. John Cruickshank Adam, Hopetoun, Milnathort, Kinross. Mr. Adam qualified as a chemist and druggist in 1904.

CRONIN. — Recently, Mr. John B. Cronin, Rathmore, co. Kerry, Eire. Mr. Cronin qualified as a pharmacist in 1925 and was in business for forty years.

GLOVER. — On August 13, after a long illness, Mr. Francis William Glover, M.P.S., Gresford, Youngs Park, Paignton, Devon. Mr. Glover qualified in 1914.

JOHNSTON. — On August 11, Mr. Herbert Andrew Johnston, M.P.S., 94 Pitshanger Lane, Ealing, London, W.5. Mr. Johnston qualified in 1952.

JONES. — Recently, Mr. Thomas Henry Jones, M.P.S., 146 Lutterworth Road, Nuneaton, Warwickshire. Mr. Jones qualified in 1927 and was formerly branch manager for Boots, Ltd., at Lampeter, Leicester, and Hinckley. He retired about a year ago but had undertaken relief duties at the George Elliot Hospital, Nuneaton.

McDEVITT. — Recently, Mr. Hugh Joseph McDevitt, M.P.S.I., St. Brigid's Street, Ballinamore, co. Leitrim, Eire. Qualifying in 1931, Mr. McDevitt established his own pharmacy in the running of which he has been assisted since 1962 by his son, Mr. Hugh Sylvester McDevitt, M.P.S.I.

SMITH. — On August 19, Mr. John Thomas Smith, M.P.S., 51 Yew Tree Drive, Chesterfield, Derbyshire. Mr. Smith, who qualified in 1938, served an apprenticeship with Graves and Son, Market Place, Chesterfield. In 1948 he bought the pharmacy of J. R. D. Barefoot, 69 West Bars, Chesterfield, and began business on his own account.

WALLACH. — On August 21, Mr. Lewis Charles Wallach, governing director of Sterns, Ltd., Royal London House, Finsbury Square, London, E.C.2. Mr. Wallach, who was in his ninety-fourth year, was also president of Sterns Inc., New York, and technical adviser to Sternol, Ltd., London. Mr. Wallach was a pioneer of safety appliances for protection of workmen in factories and mines and of introduction of medicinal liquid paraffin for internal use.

YOUNG. — On August 16, Miss Teresa Young, M.P.S.I., of North Street, Skibbereen, co. Cork, Eire. Miss Young qualified in 1924. She worked in Cork before opening in Skibbereen the pharmacy she continued to run until she recently disposed of it to Miss O'Mahoney, M.P.S.I.



A GOLDEN OPPORTUNITY



A GUINEA'S WORTH of B.P.M. Products
FREE when you display this sales making unit. This unit:

- Carries a voucher entitling you to your **FREE STOCK**
- Enables you to enter a **SIMPLE COMPETITION**
- Gives you a chance to win a wonderful **£30 DOUBLE CHRISTMAS HAMPER** from Fortnum & Mason.

Make the most of this golden opportunity by placing your order with your B.P.M. representative as soon as he calls. Another promotion in the extensive B.P.M. promotional programme, supported by continuous heavy consumer advertising.

BPM

BEECHAM PROPRIETARY MEDICINES

TWO NEW DARK SHADES

Color Glo

trade mark

**Dark Brown Sable
Rich Brown Sable**

These new Dark Shades will sell in a big way to women who want to be brunettes or have deeper, darker, browner hair. They cover grey hair too.



Biggest-Ever Advertising Campaign to open up a new market and boost Color-Glo sales even higher!

* Check your Color-Glo stocks.

* Order the new Dark Shades now ready to meet increased demand from the advertisements for the Dark Shades appearing now.

Color-Glo True Semi-Permanents. Harmless. Used straight from the bottle. Need no mixing. No skin test.
PRICES

Dark Brown Sable · Rich Brown Sable

Retail at 4/6d. Trade Price per dozen bottles 30/10d. Other Color-Glo shades continue at the existing retail price of 3/10d. Trade price per dozen bottles: 26/3d.

Manufactured and distributed by GOLDEN LIMITED

Berkeley Square House, Berkeley Square, London W1 Mayfair 8240 Republic of Ireland Enquiries to Lilmar Pharmaceuticals Limited Santry Dublin

NEW PRODUCTS AND PACKS

PHARMACEUTICAL SPECIALITIES

A New Diuretic.—Described as a “new compound unrelated to thiazides, aldosterone antagonists or carbonic anhydrase inhibitors. To combat serious sodium and water retention and cause less potassium loss,” Lasix (4-chloro - N - (2 - furylmethyl) - 5 - sulphamoylantranilic acid) is a diuretic marketed by Hoechst Pharmaceuticals, Ltd., Portland House, London, S.W.1. It is understood to produce only half the potassium loss of the thiazides for the same volume of water excreted. That means it doubles water and sodium excretion for the same potassium loss as the thiazides. Diuresis lasts about four hours and may be adjusted to suit patient’s convenience.

Vaccine in Disposable Unit.—Invirinol, the latest oil-adjuvant influenza vaccine prepared by Glaxo Laboratories, Ltd., Greenford, Middlesex, is dispensed in a new Jexin sterile disposable unit comprising a ready-assembled syringe loaded with one dose. The unit is simple to use. The central barrel is twisted to break the seal, the cap removed, the injection made and the unit thrown away. A high antibody response is understood to be produced after 2-3 weeks. From the 0·25-mil dose the chance of reaction is minimal. Four strains of killed virus are included: A/Singapore/1/57, A/England/1/61, B/England/939/59, and B/Taiwan/4/62. The pack is a box of ten 1-dose units.

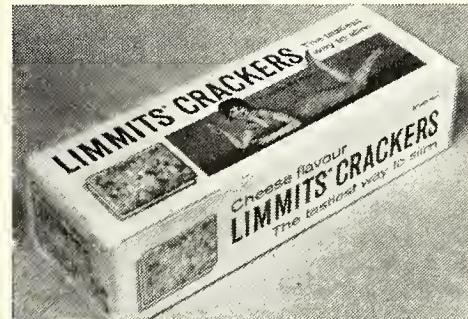
VETERINARY SPECIALITIES

Anthelmintic Given in the Feed.—A new formulation of the sheep and cattle anthelmintic Thibenzole of the agricultural division, Merck Sharp & Dohme, Ltd., Hoddesdon, Herts, enables worming to be carried out as simply as feeding wherever animals are receiving supplementary rations. The new product, Thibenzole feed-pellets, contains thiabendazole anthelmintic. It "takes all the drudgery out of dosing" and is claimed just as effective as drenching. The pellets are supplied in 7-lb. drum (sufficient to dose a total of 11,200 lb. body weight on an individual basis or 7,400 lb. body weight on a herd basis. In sheep, a 7-lb. drum doses 149 hoggs or 112 adult sheep on an individual basis, or 112 hoggs or 74 adult sheep on a herd basis.

FOODS

“Completely New” Slimming Biscuit. — Universal Laboratories, Ltd., Sandwich, Kent, announce the introduction of “a brand new concept” in slimming biscuits. Limmits crackers are described as “the first major development in the slimming market for over three years.” Since Limmits were introduced in 1961, biscuits have held a major portion of the slimming market. The new Limmits crackers look and taste just like a normal savoury cream cracker sandwich biscuit. Four eaten with milk are claimed to make a complete meal, both in nutritional value and in satisfaction. The new cheese-flavoured Limmits crackers are being featured on the Limmits stand (No.

92A) at the Food Fair, Olympia, London, W.12, September 1-16. The pack is an outer of 1 doz.



COSMETICS AND TOILETRIES

An Improved Product. — From September 1 New Monil replaces the original Monil, itself claimed by the manufacturers, Monil, Ltd., Stonegate, Hunmanby, Filey, Yorks, an unprecedented success, both with chemists on a resale basis, and with women who are using it. New Monil has been reconstituted. There are two series

At left: Display outer produced to promote the sales of new Monil. **At right:** The carton in which the Improved product is presented.



A (toning) and B (colouring). Among the twelve shades are three that are new (chinchilla grey; sherry and autumn leaf). A new look has been given to bottles and labels, and there are now new cartons for individual bottles and a display outer containing twelve bottles. The retail price of new Monil is 4s. 6d. Trade price is 30s. per doz., discounts remain the same.

French Hair Spray for Britain.—Available in Britain for the first time on August 31, and backed by a wide

NEW BATH TOILETRIES: Dubarry Perfumery Co., Eastleigh, Hants, are launching at the end of September a new range of fragrance - matched bath toiletries (toilet soap, bath soap, talcum powder, bath-salt tablets, foam bath and hand lotion). The three specially created fragrances are exclusive, and the products, inexpensively priced, are "eye-catching" packed. The three fragrances are "Spring Morning" — "a subtle blend of fern fragrance with wood witch" — "a sophisticated blue and white pack".

range of display material. Elnett Satin hair spray is claimed the top-selling hair spray in France. The can is in burnished gold. Elnett Satin is made by Golden, Ltd., Berkeley Square, London.



W.1, in two strengths "red spot" for normal hair and "blue spot" (extra strong) for greasy and hard-to-control hair.

An Improved Pack.—Julie Kellar's "sudden veil-lift" is now in a new pack that "can take its place amongst any



high-class cosmetic." Distributors are Abbey Parfumerie Co., Ltd., 7 Oxford Circus Avenue, London, W.1. Price is unchanged.



are "Spring Morning"—"a subtle blend of floral notes" (in gold and white packs), "Autumn Fern"—"a distinctive fern fragrance with woody, musky and spicy undertones (in cyclamen and white packs), and "Be-witch"—"a sophisticated fragrance of rich jasmin overlaid with musky and animal notes" (in royal blue and white packs).

TRADE NOTES

A Discontinued Size. — Boots Pure Drug Co., Ltd., Station Street, Nottingham, have discontinued the packs of ten Tabillin tablets, containing 200,000 or 400,000 international units per tablet.

A 30-gm. Size. — Additional to the 15-gm. tubes of Betnovate ointment and cream that have been available for several months, Glaxo Laboratories, Ltd., announce that those products are now also packed in 30-gm. tubes.

Appointed Distributors. — Keldon, Ltd., Wadsworth Road, Perivale, Middlesex, are, from September 1, sole distributors in the United Kingdom for Gon and Panets, which are products of Ward, Blenkinsop & Co., Ltd., Fulton House, Empire Way, Wembley, Middlesex.

Courses in Retailing. — Andrew Bainbridge and Associates, Bell Street, London, N.W.1, are holding two-day courses on September 14-15 and October 6-7, which have been designed to cover aspects of retailing such as recruiting and training staff, display, shop layout, incentive selling, customer relations, etc.

Samples in Hotels. — For a trial period of ten weeks, from August 31, Nicholas Products, Ltd., are issuing over 150,000 free samples to twenty-eight Ind Coope hotels. The samples are in a specially designed "book match" pack, each carrying two digestive tablets. As part of the hotel service, a free sample pack is being supplied to each bedroom and a new one replaced when the room is vacated.

Roman Holiday Contest. — Twenty out of forty preliminary heats in the Wonder Set Roman holiday contest, organised by Reckitt & Sons, Ltd., Hull (C. & D., March 7, p. 232), have been completed in cities throughout the country. The contest is part of a heavy national promotion for Wonder Set, now reduced in price. Preliminary heats start again on September 8. All heat winners go forward to compete in finals at the Lyceum ballroom, London, on November 16.

Baby-food Contest. — A first prize of £1,000 and 5,000 teddy bears for runners-up are being offered by the H. J. Heinz Co., Ltd., Harlesden, London, N.W.10, in a "Happy Christmas" baby-food contest open from September 21 until November 21. Winning mother is being presented with her £1,000 prize on Christmas Eve. Entry forms are obtainable only from Heinz baby-food stockists. Competitors are required to select the eight toys listed on the form in their order of suitability as the ideal toy for a child aged one to two years. Space is provided for three attempts on the entry form, and each attempt requires six Heinz baby-food labels. The teddy bear, 11 in. high, is easy to keep clean (nylon fur is washable). The offer is being advertised with a full-page colour advertisement in *Woman* on October 24. Display material features Father Christmas with a baby; it includes counter cards with leaflet "dispensers," 20 x 30 in. centre piece for display bins, flag showcards, and display cards for the nine-tier stand.

Training for Cosmetic Assistants. — Chemists with substantial cosmetic departments may have to think hard how to deal with sharpened competition as the Resale Prices Act takes effect. One method is to ensure that assistants have more than just a passing knowledge of the products they handle. Already during the past two years a number of chemists have been sending their assistants to courses for diplomas granted by the Society of Beauticians. The course leading to the Society's make-up and manicure diploma gives assistants the technical experience and background for passing on accurate information to clients on the use and application of cosmetics. Assistants so trained gain public confidence by their advice, and that is reflected in sales. The training is independent of and different from that offered by cosmetic manufacturers. The courses may be taken at various technical colleges, colleges of further education and commercial schools. In London, they are also available at the Du Barry Beauty School, 31a James Street, London, W.1. Interested pharmacists may obtain further information from the Society, whose address is 44 Old Bond Street, London, W.1.

Arrangements for Distribution. — Cuxson, Gerrard & Co., Ltd., Oldbury, Birmingham, state that they have been aware for some years that distribution of their products—especially Carnation corn caps—is sometimes not quick enough for the retail chemist. At the same time they wish to keep control of their distribution because of the company's "chemists only" policy. They have therefore entered into an agreement with The British Drug Houses, Ltd., Graham Street, London, N.1, whereby B.D.H. will distribute the Cuxson, Gerrard speciality products. The change will not alter the "chemists only" policy, but will give every retail chemist the chance to buy small quantities of goods at short notice. B.D.H. will hold stocks of all the speciality goods named in List 55/1/3 at all the depots in their network. Costs of distribution have been rising steeply on small orders, however, and Cuxson, Gerrard & Co., Ltd., have decided therefore, not to accept themselves any order below £5 in value and to alter their carriage-paid terms. The two changes, independent of each other in their causes, but intimately related in their effects, become effective on the same day, September 1. In future B.D.H. will handle all the small orders for the Cuxson, Gerrard specialities.

Christmas Showrooms

THE following is being held from August 31 to September 3:—
GEORGE SPENCER & SON, LTD., Hotel Metropole, LEEDS

The following are being held from August 31 to September 4:—

BOURJOIS, LTD., Griffin Hotel, LEEDS, 1. Midland Hotel, MANCHESTER, 2. Midland Hotel, BIRMINGHAM, 2. St. Enoch Hotel, GLASGOW. Adelphi Hotel, LIVERPOOL. Royal Turk's Head Hotel, NEWCASTLE-ON-TYNE, 1.

H. BRONNLEY & CO., LTD., Queen's Hotel, BIRMINGHAM, Griffin Hotel, LEEDS.
COTY (ENGLAND), LTD., Greyhound Hotel, CROYDON. Royal British Hotel, DUNDEE. Adelphi Hotel, LIVERPOOL. Midland Hotel, MANCHESTER.
CUSSONS, SONS & CO., LTD., Royal Turk's Head Hotel, NEWCASTLE - ON - TYNE. Adelphi Hotel, LIVERPOOL. St. Enoch Hotel, GLASGOW. Queen's Hotel, BIRMINGHAM. Griffin Hotel, LEEDS. Royal Hotel, CARDIFF.
J. GROSSMITH & SON, LTD., Queen's Hotel, CARDIFF. Queen's Hotel, LEEDS.
SHULTON (GREAT BRITAIN), LTD., Queen's Hotel, CARDIFF. Griffin Hotel, LEEDS

Bonus Offers

ALLEN & HANBURY'S, LTD., Bethnal Green, London, E.2. Atomol, 2 doz. 4s. Atomol. Twenty-four invoiced as twenty-two; forty-eight invoiced as forty. *Allenburys pastilles*. Seventy-two invoiced as sixty-six. (Purchase tax charged on all units supplied.)

J. ALLEN RUBBER CO., LTD., Harbour Road, Lydney, Glos. Marigold snap-on baby pants. Twelve invoiced as eleven adjustable snap-on and snap-on.

TOBAL LABORATORIES, LTD., Queenborough, Kent. Antussin products. Twelve invoiced as eleven on minimum of 4 doz. During September and October (adults' liquid, children's liquid, chewable capsules or assorted). Orders through wholesale chemists or direct.

PHOTOGRAPHIC NOTES

Colour Processing in East Yorks. — Brid-Photos, Ltd., Westmoreland Grove, Bridlington, Yorks, undertake the processing and printing of Ilfocolor roll films.

A Nought Too Many. — Additional equipment installed at the premises of Photo Finishers (Sheffield), Ltd., Union Road, Sheffield, is costing £8,500 and not as previously stated. The installation is additional to the company's existing colour processing plant, representing a figure of £30,000.

Dealers on Advisory Council. — Eight dealers, one from each of the company's trading territories, have been invited by Rank Photographic, Woodger Road, London, W.12, to join the Rank Photographic Dealer Advisory Council. The object of the council, which will meet every six months, is to improve dealer and customer liaison.

Slide Transfer and Storage Cabinet. — An addition to the range of products for packing photographic accessories marketed by Robinson & Sons, Ltd., Wheat Bridge Mills, Chesterfield, Derbyshire, is a cardboard cabinet with four inner transfer boxes each holding thirty-six slides separated by plastic divisions. The cabinet is fitted with a hinged lid and a fall front and has a plain labelled front on which an identification can be written. The inners are indexed on top of the lids and have space for general referencing. The inner boxes are stated to transfer their contents accurately *en bloc* into a magazine merely by inverting the box over the magazine. Reversing the process easily conveys slides from the magazine back into the indexed box.

INFORMATION WANTED

The Editor would appreciate information about:
Cotton socks (surgical)

Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

Disparate Opinions

SIR.—Mr. D. E. Sparshott claims to be in favour of Resale Price Maintenance, but his employers are clearly against it, as they have shown by their reaction to the recent Gillette announcement. This disparity in opinions proves that, if we are to have representatives of multiple firms on the Council, Messrs. Boots cannot be represented by Mr. Sparshott. Why bother to choose a superintendent—or even a pharmacist? Surely the man for the job is the director with the largest shareholding?

E. W. MORLEY,
Southsea, Hants

A Correction

SIR.—May I compliment you on your treatment of my short history of pharmacy in Lancaster, but would like to point out one small part which can be wrongly read. It is with reference to the paragraph about the withdrawal from National Health Insurance in 1916, where you say the Lancashire Insurance Committee persuaded Messrs. Cuthberts and Aked to withdraw their resignations, and "the other chemists followed suit." This is not correct. What actually happened was that the other chemists amicably agreed that the two shops named should withdraw their resignations, but the remaining shops took no further part in N.H.I. dispensing for several years.

ANDREW MEDCALFE,
Lancaster

Products Not Stocked

SIR.—Re the letter from Mr. Kenneth Milne, M.P.S. (*C. & D.*, August 22, p. 171), the company which I represent would like to offer support to him in his wish to cease stocking the range of Beecham's products (and certain others' also!). We are heartily in agreement with this. In actual fact, we have already notified Beechams that we no longer desire their representative to call upon us. We have also, for a considerable period now, refused to entertain any representative who is not "chemists only." There is one thing, incidentally, which we should very much like to see and that is the two main pharmaceutical publications stopping the advertisement of products which are not "chemists only."

HUGH JOHN LEONARD, M.P.S.,
Parkstone, Dorset

No Backbone? No Legs?

SIR.—I heartily agree with every word written by H. D. Jardine, Coventry. Far too many men qualify, open shop to sell merchandise, and then try their damnedest to see how little they can sell. To refuse to stock certain lines because the grocer nearby has decided to sell them is just "cutting off one's nose to spite one's face." Display and push the lines the grocer is trying to filch from you, and by superior personality, service and business acumen,

draw customers into the chemist's. Why hand it to the grocer "on a plate"? Pure, ethical pharmacists should shut up shop and open a dispensary. There is little to be gained by sitting still in a "Mini" and looking with envy at Mr. Boot, Mr. Taylor, or Mr. C.W.S. in their "Rolls." The aim should be to get on the band-wagon!

SAM B. RYAN,
Tickhill, nr. Doncaster

Queue Offers Cue

SIR.—The unhappy story in the *C. & D.*, August 22, p. 176, of the pharmacy belonging to Mr. H. A. O. How, M.P.S., and the closing down so soon after a complete rehabilitation, must have been read with heartfelt sympathy by all of your readers. One hopes that, rather than have to job off his stock at closing-down time, Mr. How will have had a sympathetic reception from any manufacturers or wholesalers whom I hope he will have approached with a request to repurchase his stock at list price. However, the final sentence in the report intrigues me—"Buckinghamshire's county town now has only five pharmacies to serve its 25,000 population, swollen on market days by a large influx. . ." Lucky Aylesbury pharmacists! The national average per pharmacy (Nielsen figures) is 3,200, and many pharmacies in the south do not call on this figure even. It would seem your correspondent's sympathy for the remaining pharmacies is misplaced, or is his sympathy for the suffering public queuing up to get served?

CHARLES W. BRUCE,
Westcliff-on-Sea

Success Through Professionalism

SIR.—In reply to Mr. H. D. Jardine (*C. & D.*, August 8, p. 125) who has seen fit to abuse me through your correspondence column, may I say that in my opinion, Mr. Jardine belongs to a small cross-section of pseudo-professional pharmacists whose motto seems to be, "If you can't beat 'em, join 'em." I probably make more profit in a week, selling and dispensing my own specialities, than they do in a month with their modern stores packed with jewellery, nylon stockings and junk, trying to ape the American drug store. Modernise by all means, but keep a professional appearance and do not lose the confidence of the public in an endeavour to increase turnover to the detriment of the professional side of the business. As for being an out-dated stick-in-the-mud, that is an assumption too contemptible to start to argue about.

N. H. RADCLIFFE,
Aughton, Ormskirk, Lancs

SIR.—Your correspondent Mr. Jardine (*C. & D.*, August 22, p. 172), seems to have had a touch of verbal diarrhoea. We are all well informed about the state of retail trading. The position is caused by modern methods in the factories, over-producing at an

alarming rate. The bonus-parcel offer does not seem to have eased the position, and the factories are faced with the problem of either slowing down production or finding new outlets, and that means spreading over the whole retail trade. To assist in that process resale price maintenance was made illegal. We are faced with the problem: Is it worth the studying and qualifying in pharmacy when all but a few scheduled articles are being sold in any trade, and can we, as in the past, make pure pharmacy support us?

FRANK LEDSHAM,
Ewell, Surrey

For, Against and "Don't Know"

SIR.—The Resale Prices Act is now law; but during a period of three months from August 16 suppliers and trade associations will be able to register products on which resale prices are maintained and on which, provided details are registered, prices can continue to be maintained unless and until the Court orders to the contrary. Some manufacturers (e.g., Addis, Kodak, etc.), have announced their intention of registering their products. They may not be successful but they have shown willing! Others (such as Gillette) have thrown in the sponge before the fight started. Others have not stated their policy, and the only indication we have of who is dodging the column is left to a chance remark by a customer. For instance, I learned (and checked) that a supermarket was selling bottles of Sebbix at 2s. 3d. (Psorox and Pixcyl were not mentioned). Perhaps somebody could compile lists of (a) manufacturers who intend to make a fight of it; (b) those who have definitely sided with the supermarkets and (c) those who are sitting on the fence.

R. HUTCHINSON,
London, S.E.7

Apothecaries Once More?

SIR.—The proposal to revive, or, more strictly, to transfer the old title "apothecary" to a set of persons who have hitherto not laid claim to it, has interesting possibilities, but poses a number of questions. It should be realised that the titles "apothecary" and "pharmacist" equate, and in translation become *pharmacien* and *Apotheker*; moreover, the French still retain the old word *Apothécaire*. The suggestion that a chemist's shop might properly be called a pharmacy was made by Thomas Ince about eighty years ago, but the term "pharmacist" did not become generally current until some time between the wars, and then only among chemists and druggists; the public never took to it. Further, the matter is complicated by the use of the term "retail pharmacist," an expression that will not translate into anything a foreigner might comprehend. Ask any Frenchman what he would make of *pharmacien en commerce de*

detail, or a German of *Händlerischer Apotheker*! But there is one expression that describes exactly our origins and present-day activities and aspirations; that is our official title "pharmaceutical chemist." The public is instinctively right in continuing to call us "chemist."

J. T. MARRIOTT,
Hemel Hempstead, Herts

Priceless

SIR,—How desperate some firms are getting to achieve outlets for their products. After the recent nylons in the pharmacy attempt, we have in this week's *C. & D.* announcement of an "instant shoe colouring." Taking a leaf out of the cosmetic houses' book they offer, with an elegant free display stand, 10¹₂ doz. units to give 120 colours. How absolutely stunning! Obviously the supermarkets have told them what to do with their shoe colouring. So, to start the sales off, they say to themselves "The pharmacy first. If it sells there—we shall be interested." Notice the lack of information on the retail price of each item. On the question of retail and cost price we have been asked by the makers of Halaspray for some weeks now with large adverts in *C. & D.* to order now to obtain the equivalent of 19s. extra bonus in addition to the normal 50 per cent. on outlay. No mention of your outlay, whether you are buying for 5s. per doz. or £50 per doz. Also no mention of the retail price. I had the company's representative in yesterday and, after giving vent to my feelings, I asked him twice in 5 minutes for the retail price. Cleverly he evaded the issue—told me how much advertising was being done. How much was being spent on television advertising, etc. "Can I put you a dozen through the local wholesaler?" Still no mention of cost price or retail price. It was at this point that I reminded him that he had been talking for 7 minutes and I had asked him twice for the retail price. Then reluctantly and in a much lowered and whispered voice said "9s. 6d."

S. G. WALSH,
Liverpool

Pre or Post?

SIR,—Recent editions of THE CHEMIST AND DRUGGIST have reported the views of the Council of the Society on the practical training of students, and it would seem that it will be only a matter of time before practical training undertaken after college will be the sole method recognised officially. This means in effect that the Society will have completely removed from the student his freedom of choice in selecting his own route to qualification, a choice which in the past has often been affected by personal and family economics and commitments. It was stated in the *C. & D.*, that Mr. Aldington had expressed the view that pre-graduate training produced the best type of pharmacist, and that it should be recognised for those who preferred it. Both Mr. Howells and Mr. Steinman appeared to support that theory. At a subsequent meeting Mr. Sparshott, who has wide experience in the training of pharmacy students, and the National

Pharmaceutical Union, with its own nation-wide contacts, have both expressed concern at the Council's decision to abolish pre-graduate training. Many other pharmacists, I know, also think that it is desirable to give further thought to this problem, even at this late stage. I myself have had the opportunity to train a dozen pharmacy students who entered pharmacy by way of the pre-graduate route. They have turned out to be first-class pharmacists. I am convinced that many of them may not have chosen pharmacy if the post-graduate method had been the only one open to them, and I cannot see the need for the Council to alter arbitrarily a policy that has produced such good results in my own experience and that of many others.

FRANK WHITE,

Coventry

[Mr. White is a past-chairman of the Peterborough and District and Coventry and Warwickshire Branches of the Pharmaceutical Society.—EDITOR.]

Cut-price Ethics

SIR,—It has been brought to our attention that a "well known firm of multiple chemists" have cut the accepted retail price of Silver Gillette blades to a price comparable to that of the supermarkets. This is not the first time such a firm has indulged in price juggling, despite the fact that private pharmacies have had to toe the line by Pharmaceutical Society directives. One can recall the Society's objection to the Rexall "penny sale"—a justifiable objection, we might add—it being unethical for pharmacists to indulge in cut-throat merchandising. However, it would appear that the sale of analgesics by this same multiple firm at a cut-price rate for two bottles (or was it three?) did not offend the Society, although it certainly offended private chemists. Small wonder that M.P.s are not impressed by our case for restricting the sale of medicines over the counter to the chemist's shop! It would appear that the Society is quick to bring individual pharmacists back to the ethical fold, but is dilatory in bringing multiple firms into line with private pharmacies. Such facts have not escaped

the critical eye of the general public, and they are not averse to comment on the differential existing. The time has come for the Society to enforce their directives on all pharmacies, whether multiple or private. Failure to comply should be dealt with as severely as the private concern is treated. This could help to solve the differences existing between private and multiple firms. Incidentally we await with interest the Society's course of action as regards the proposed building of a G.E.M. Supercentre at West Bridgford, Nottingham, in which building there will be pharmaceutical goods offered for sale, these goods to be sold at a discount by the retailers who lease space. If, as is proposed, it is to be a "one-stop" superstore, then a chemist will almost certainly have to be installed within such hallowed walls. Which way will the Society jump? For or against? If against, why no action now to cut-price retailing by our "professional" competitors?

J. E. POWDERLY,
Sileby, Leics

[The Pharmaceutical Society's statement strictly applies to "drugs, medicines and medical and surgical appliances." Whether that extends to razor blades may be doubted.—EDITOR.]

A PHARMACEUTICAL BYGONE



A doctor's travelling dispensing chest—scales in front—in the Alton, Hants, museum.

DANGERS OF NATIONALISING DRUGS

First meeting of Pharmaceutical Study Group

THE dangers involved in the nationalisation of the pharmaceutical industry, or the setting up by the Ministry of Health of its own production or marketing machinery were referred to by Dr. Trevor Weston, when he spoke to the Pharmaceutical Study Group in London on August 22. He said "Nationalisation or any other form of stifling of the initiative of the pharmaceutical industry cannot help but be accompanied by a restriction of doctors' freedom to provide whatever drugs they think are most likely to benefit their patients best. Doctors, and even more important, patients, must realise before it is too late that Government control of the pharmaceutical industry and the preservation of professional freedom for doctors are incompatible. You cannot have the Government manufacturing and marketing drugs

without the doctor being compelled to accept someone else's ideas about what he can prescribe. Mr. Ivor Boden (managing director, E. R. Squibb & Sons), who took the chair at the meeting and explained the plans for the Pharmaceutical Study Group, of which it was the first meeting. The objects of the group were to put an end to prejudiced, irresponsible and tendentious denigration of the pharmaceutical industry and to work towards creating an atmosphere promoting understanding between the industry, Government and university circles and the general public. Mr. Boden explained that it was hoped to hold regular bi-monthly luncheon meetings of the Pharmaceutical Study Group with a guest speaker. Attendance would be open to those interested in the development of the nation's medicines, both inside and outside the industry.



The CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

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Man-power as a Continuing Study

THE first report of the Ministry of Labour's Man-power Research Unit (see p. 186) represents the beginning of an important development in the work of the Ministry of Labour. The unit is to give increasing attention to the forecasting of future man-power requirements.

Commenting on the report, Mr. Joseph Godber (Minister of Labour) has said that, though the views expressed in the report must be regarded tentatively and as subject to revision, two points stand out clearly. The first is the declining rate of increase in man-power resources within the next decade. The second is the considerable growth of employment to be expected, especially in the services sector, on the assumption (basic to the report) that economic activity in the United Kingdom generally will be maintained at a high level over the next five years and beyond. Those factors suggest that, during the next few years, there is likely to be a shortage rather than a surplus of man-power.

An increase in part-time working by married women is also to be expected, as well as a falling off of the number of young people entering the labour market, a situation that will be accentuated by the raising of the school leaving age in 1970.

Those estimates on a national level are likely to be replicated in the pharmaceutical industry in all its aspects. Manufacturing, wholesaling and retailing and even hospital sectors are all likely to reflect increased competitiveness for man- (and woman) power. All must therefore strive to increase productivity so soon as possible if future development is not to be impeded.

Attention must also be given to the conditions of employment of labour to make them sufficiently attractive for the recruitment of the required personnel. The next five years may be all too short a period for some sectors of pharmacy to carry out the necessary adjustments. The Ministry of Labour's forecast should act as a challenge. Pharmacy's general situation is likely to be complicated by special problems varying from the five-day week in retail establishments, the side-effects of the Government's manipulation of section 46 of the Patents Act in the manufacturing sphere, to say nothing of the hospital field where man-power problems are already acutely evident.

Prizes in the Skin Game

WORLD usage of cosmetics is estimated to be in excess of £750 millions a year. Of that total a large percentage is concerned with the sale of products formulated for application to the skin.

In the United Kingdom the pharmacist has been traditionally the principal supplier of cosmetics to the public. In spite of the successful attempts by other retailers to take a share of the market, he continues, so far, to hold pride of place.

The progressive acceptance of the value of cosmetic and skin preparations by an increasing number of potential users, by creating an expanding market, has tended to lessen somewhat the apparent effect of the outside competition on the pharmacist's turnover. It nevertheless exists and needs effort on his part to meet and overcome.

An outstanding feature of the present situation is the way the value of cosmetic and skin preparations is being accepted by an increasing proportion of the public. Specially noteworthy in that respect is the growing use of cosmetic products by men. Formerly sales of male cosmetics were small in total and limited to the Christmas trading period. They now offer the likelihood, even the certainty, of increased turnover in all pharmacies throughout the year. The increase, it should be noted, is not at the expense of other business, such as the trade in feminine cosmetics, and is even more likely to remain with the chemist and not go elsewhere, since men are less prone than women to satisfy their personal shopping needs at supermarkets and self-service shops.

The present issue of the *C. & D.*, much of which is given over to the subject of the skin and its care, thus deals with an important and hitherto rewarding aspect of a chemist's business. Not the whole of the subject, of course, is concerned only with the products of the cosmetic industry. A number of dermatological problems arise in the pharmacist's contacts with the public. Some of those problems are dealt with in expert contributions in the pages that follow.

On the turnover side the greatest problem cosmetics present at the present time, apart from the perennial problem of multiplicity of stock, is how to assess the possible effects of the passing of the Resale Prices Bill, 1964. On pondering its possible effects on his cosmetic trade, the chemist will probably arrive at the conclusion that, though many skin preparations are bought as "impulse purchases," a large proportion of sales will continue to arise from advice over the counter. So long as the advice is good and readily given the situation will last. Every proprietor can take a hand in his own future by making certain that his assistants are aware of the technical no less than the aesthetic advantages of the various products offered for sale. They in their turn can then contribute to his service of providing sound independent advice and so ensuring repeat sales.

A PHARMACIST'S ANTHOLOGY BARBADOS TAR

From "Shadows on the Rock," by Willa Cather
WHILE Cécile and Jacques were counting over these boxes of sweetmeats and wondering who would buy such luxuries, Auclair told them he was much more interested in a jar labelled "*Bitumen—oleum terræ*" than in the conserves. It contained a dark, ill-smelling paste which looked like wagon grease; a kind of petroleum jelly that seeped out of the rocks in a certain cairn on the island of Barbados and was carried from thence to France. He had great need for it here in Canada; he purified it, added a small amount of alcohol and borax, and prepared a remedy for snow blindness. . . . This, Auclair explained to the children, was because all animal fat contained impurities, and this "Barbados tar," as it was vulgarly called, might be regarded as a mineral fat.

NEW BOOKS

The Evaluation of Therapeutic Agents and Cosmetics

T. H. STEINBERG and VICTOR D. NEWCOMER, editors. *McGraw-Hill Publishing Co., Ltd.*, Shoppenhangers Road, Maidenhead, Berks. 9 × 6 in. Pp. 293. £7.

THE declared purpose of this book is to bring together the views of a number of persons in a wide variety of positions, all of whom are concerned in one or another aspect of the testing and marketing of new drugs, and to consider in detail the inherent medical, legal and moral obligations of the physician to the patients on whom he is testing such drugs. The book begins with an anatomical and physiological description of the skin, describing the mechanism of action of soaps, detergents, medicaments and emollients, and describing the various types of toxicity of those materials. Those factors then are related to methods of investigation which can be applied to new commercial therapeutic agents and cosmetics. The basic information for the book was derived from a conference organised by the University of California, Los Angeles.

Cosmetics and the Skin

F. V. WELLS and IRWIN I. LUBOWE. Reinhold Publishing Corporation, *Chapman & Hall, Ltd.*, 11 New Fetter Lane, London, E.C.4. 9 × 6 in. Pp. 690. £8 16s.

THE authors have produced a book that will benefit those who are concerned with the research and production of cosmetic preparations for the skin, hair and nails. It contains numerous up-to-date formulas for a wide variety of products including lotions, shaving cream, face creams, deodorants and facial preparations. There are chapters dealing with preparations for the hands and feet, body cosmetics, and preparations for the hair. Of special interest is the section on toiletries and cosmetics for men and one on specialised cosmetics that refers to aerosol preparations and "miscellaneous cosmetics." The latter includes short references to baby specialities, and a brief note on cosmetics for the older woman. The inclusion of many references is of extreme value to those who must pursue a topic further, although it is likely that in many cases answers will be found without further research.

Handbook of Cosmetic Science

H. W. HIBBOTT (Editor). *Pergamon Press*, Headington Hill Hall, Oxford. 9 × 6 in. Pp. 556. £5.

THIS book arises from an educational course at Brunel College, London, W.3, organised by the Society of Cosmetic Chemists of Great Britain. It is an introduction to scientific principles and their application to the production of cosmetics. Eighteen contributors, most of them engaged in the cosmetic industry, are specialist lecturers for the Society's course. The book is diverse in its approach, having sections dealing with the chemistry of raw materials, microbiology, physical chemistry and the desiderata of various cosmetic products. Chapters are also included on formulation, product evaluation and package testing. Because of the wide range of the many subjects that are dealt with, the details given in the handbook must on occasions be rather sketchy, but that difficulty has been admirably overcome at the end of some chapters by listing references and in some cases reference books. The editor has produced a readable textbook amply illustrated with clear diagrams and tables.

Microbiological Methods

C. H. COLLINS. *Butterworth & Co. (Publishers), Ltd.*, 4 Bell Yard, London, W.C.2. 8½ × 5½ in. Pp. x + 330. 50s.

THE author has set out to provide a practical textbook for students preparing for the examinations in microbiology of the Institutes of Science Technology and Medical Laboratory Technology, and for university degrees in microbiology. He assumes no prior knowledge of the subject on the part of the reader and devotes some time to general considerations of the characteristics and classification of micro-organisms. Part II deals with apparatus, materials and methods, including the preparation of culture media and the estimation of bacterial numbers. The main groups of micro-organisms and methods of isolating and identifying them are described in Part III. Pharmaceutical students will find the foregoing sections (which occupy over two-thirds of the

text) a useful introduction to the subject, but will be left to search elsewhere for applied aspects, for the remainder of the book is given over to food products.

Encyclopædia of Surface-active Agents, Volume II

J. P. SISLEY and P. J. WOOD. *Chemical Publishing Co., Inc.*, 212 Fifth Avenue, New York, U.S.A. 9 × 6 in. Pp. v + 501. \$16.50.

THIS volume, like the first, was originally a French text by the late J. P. Sisley who was director of the *Institut des Corps Gras* and general secretary of the French Association of Textile Chemists. It was translated and revised by P. J. Wood, himself a textile consultant. The book has two parts, Part I providing general information on and classification of surface-active agents and Part II being an alphabetical list of commercial brands of surface-active agents. There is a table of contents but no index. Part I (194 pages) consists of a number of chapters intended no doubt as brief summaries but often of doubtful value. For example, Chapter 5, "Properties of Surface-active Agents," consists of an interesting enough discussion of soap versus Syndets, mainly from the "household" point of view but without a mention of the physico-chemical properties which most readers would expect to find. Only five references are given, the latest being dated 1950. Chapter 6, "Detergent Builders and Synergists" is much more to the point and is a useful summary of information backed by thirty-five references, but again these stop at 1952. A lot of water has passed through the washing machines since then. Chapter 7, "Classification of Surface-active Agents," is the best and longest (140 pages). Undoubtedly it was Sisley's main interest and it is an attempt, largely successful, to impose a simple system on a confusing mass of information. The test is backed by references, many of them to U.S. and French patents, that will be of interest to the specialist, but the British pharmacist would be hard put to it to gain information about his official surfactants because the volume is essentially about commercial surface-active agents. Once again references appear to cease at 1952 and perhaps it is to the point that the introduction by Sisley (presumably to the French text) is dated 1953. Part II is a 302-p. list of commercial surface-active agents, and the following example illustrates the type of information available:

P. 465

Teepol 137. Shell

Corresponds to:	Teepol (Shell)
Composition:	Secondary alcohol sulfonate
Class:	I/L
Form:	Liquid with a strong odor
Application:	For cleaning the cloth covering of seats in public vehicles.

That product has not been marketed in this country for at least two years and for the Teepols that are available the limitation implied in the suggested application is misleading. Class I/L does refer to the correct class of secondary alcohol sulphates. However, the problem is whether any such list can be of value unless it is revised as continuously as a drug index of new products. What a pity it is that this volume was not published ten years ago!—B.W.B.

Paper Sculpture

ARTHUR SADLER, F.R.S.A. *Blandford Press, Ltd.*, 167 High Holborn, London, W.C.1. 11 x 8½ in. Pp. 144. 25s.

PAPER sculpture seems to have been ignored by pharmaceutical chemists as a display adjunct. Yet Sadler's handsomely illustrated book shows it to be a versatile craft, capable of yielding lively patterned 3-D backgrounds and decorations, naturalistic as well as conventional, animals, birds, human faces and figures, either alone or in elaborate tableaux. With the trend currently towards backless windows paper sculpture could perhaps be used to new and telling purposes. Could it not produce the symbol to replace the almost unobtainable carboy? A paper mortar and pestle could be an attractive decoration labelling the premises as a pharmacy. For any pharmacist who care to take up the craft, if only as a hobby or cultural pursuit, "Paper Sculpture" gives all necessary information about tools and methods, with a wealth of excellent examples to emulate until one's own creative talents took over.



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A C.&D. special issue on

CARE OF THE SKIN AND PRODUCTS FOR PROMOTING IT

Skin and Skin Creams

Basic principles of formulation

M. CANTLEY, Ph.D. (*Unilever Research Laboratory, Isleworth*)

THE skin is one of the largest organs of the body. It is divided into three well-defined structural layers: the epidermis, the dermis or corium, and the hypodermis or subcutaneous adipose tissue. The epidermis, being the outermost of those layers, is the most important in considering the application of skin creams. It is defined as a stratified squamous epithelium, and five strata are recognised:

Stratum corneum	(horny layer)
Stratum lucidum	
Stratum granulosum	
Stratum Malpighii	(prickle cell layer, stratum spinosum)
Stratum germinativum	(basal layer)

The layers are not distinct but merge into one another. That is because cells are continuously being produced by mitosis in the lowest layer of the epidermis—the stratum germinativum—and being forced up through the intervening layers to the outermost horny layer. In moving upwards, the cells become keratinised, so that the polyhedral living cells of the basal layer become the flattened scaly dead cells which are eventually sloughed off from the surface. Each of the five layers is characteristic of a particular stage in the keratinisation of the epidermal cells. The constant turnover of cells in the skin provides for rapid repair of superficial cuts and abrasions. The duration of the cycle, i.e. from formation of cell to loss from the surface is, for facial epidermis, approximately three weeks.

Epidermal structure, particularly in terms of the relative thickness of the different layers, varies greatly between different mammalian species and according to the part of the body. The stratum corneum is composed of many

layers of flattened cells without nuclei and fully keratinised. It is thickest on the soles of the feet and thinnest on the face. In areas such as the plantar surface, the cells of the stratum corneum retain their integrity and are believed to be held together by an intercellular cement, so that they are exfoliated less readily than in areas where the stratum corneum is thinner. In normal skin there is a balance between the rate of production of cells in the stratum germinativum and the rate of loss by exfoliation from the surface. If that balance is disturbed, as when a limb is enclosed in plaster, dead cells accumulate at the surface. The sweat glands (eccrine and apocrine), hair follicles and sebaceous glands, which are of epidermal origin,

extend into the dermis. Sebum, which is a complex mixture of fatty materials and emulsifiers, is secreted by the sebaceous glands and spreads over the outer epidermal surface, where it acts as a lubricant and has some influence on the rate of movement of water through the skin.

The skin is involved in control of the water content of the body and in thermoregulation of the body. There are two routes of water loss through the skin—via the sweat glands and transepidermally. Under normal conditions the water content of the skin is approximately 20 per cent. by weight. If it falls to approximately 12 per cent., cells at and near the surface shrink and curl at the edges, giving the characteristic rough feel of dry skin. If dehydra-

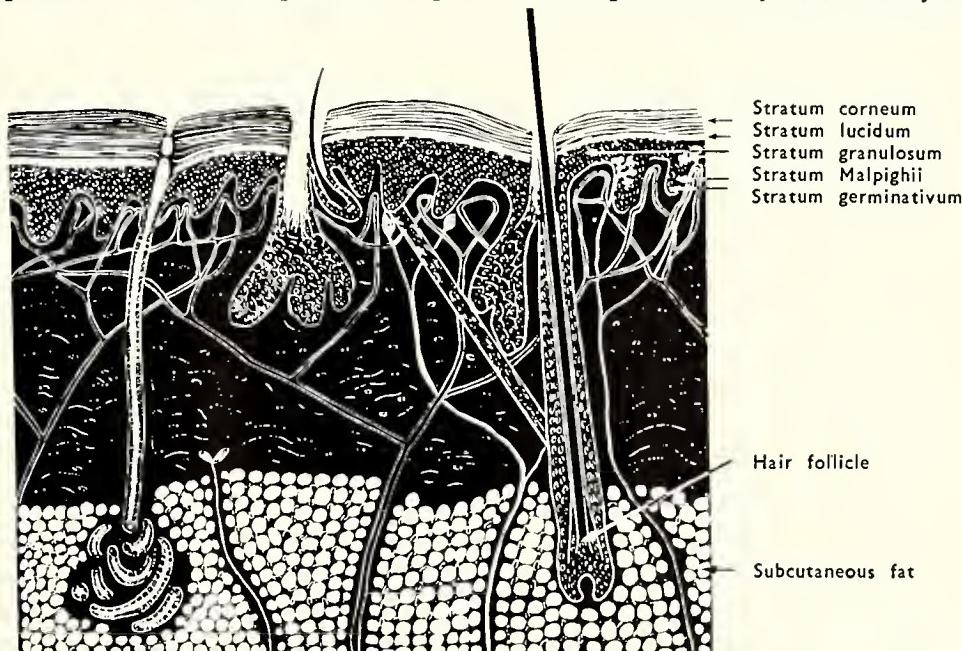


Diagram from *Handbook of Cosmetic Science*, editor H. W. Hibbett, Pergamon Press, 1963.

tion continues, cracking and bleeding may occur. The rate of movement of water across the epidermis is governed by the nature of the intermediate layers of the epidermis, particularly the stratum lucidum, and to a limited extent by the presence of sebum on the outer surface of the epidermis. Removal of sebum by the action of detergents permits an increased rate of transepidermal water loss. Since sebum contains emulsifiers it can be removed by prolonged contact with water alone. When the moisture content of the atmosphere is low, the rate of loss of water from the epidermis may be greater than the rate of passage from within the body.

The softness of the stratum corneum is related to its water content. Products or ingredients which restore the suppleness of skin—emollients—act by conserving water in the horny layer. If a piece of hardened epidermis is immersed in oil, it remains hard. If it is immersed in water it becomes softer. Emollient depends on a supply of water, which penetrates into the epidermis to replace that which has been lost, and an oil phase of suitable properties, which will form a partially occlusive film on the surface and thereby prevent excessive loss of water. Humectants may be added to skin creams in an attempt to hold moisture at the skin surface. Their use for that purpose is, however, open to debate, since they may absorb water from the epidermis as much as from the atmosphere. Humectants therefore probably only increase the rate of attainment of equilibrium of moisture between the skin and the atmosphere.

Obvious Choice

Since oil and water are necessary for the treatment of dry skin an emulsified product is the obvious choice on account of its cosmetic elegance. Oil-in-water emulsions apply water freely to the skin surface and rub in easily. They fulfil ideally the requirements of an emollient cream. A stiff oil phase with a high melting point may be used without making the product too viscous or difficult to spread. Oil-in-water creams are therefore indicated for non-greasy products. Water-in-oil creams, on the other hand, have the greasy feel that is important for the connotation of richness required with night and nourishing creams. The percentage of oil in a product is less important than emulsion type in determining apparent greasiness. The melting point and viscosity of the oil phase are also important in that respect.

The skin cream market is fragmented into many different product types for two main reasons. Firstly, if the product is to perform a specific function effectively, it must be formulated to meet that particular requirement. Secondly, sophistication of the market is leading the consumer to be selective

in choosing a particular product for a particular purpose.

Moisturising or emollient creams are dealt with first in so far as they are basic to all skin creams. At low relative humidities the rate of loss of water from the skin surface may be greater than the rate of passage from the interior. As already indicated, softness of the stratum corneum is related to its water content. Emollient or moisturising creams are formulated to conserve water in the stratum corneum, thereby restoring suppleness to it. The use of humectants in products of this type is subject to the reservations made above, and they may tend to make the product tacky on the skin. The cream should have a connotation of richness, which may be given by colour, texture and perfume. It should spread easily, appear to be slowly absorbed, leave the skin greasy but not excessively so, and should soften the skin. Although a water-in-oil (W/O) cream conveys richness, an O/W cream is required for optimum emollient. There should be about 45 per cent. oil phase of melting point less than 37° for the desired spreading properties. For night creams, a W/O emulsion may be more suitable. The texture and spreadability of the products are then determined by the consistency of the oil phase, of which about 65 per cent. may be included.

Hand Creams

The main functional requirement of a hand cream is that it should soften dry skin, but it should not be so greasy as the typical emollient cream, because it must be suitable for application by the housewife during the day, without danger of leaving stains on household articles. A hand cream must rub in easily, and its viscosity must be such that a small quantity can be dispensed from the container. An oil-in-water cream with around 15 per cent. oil phase melting above 37° to leave a solid rather than a liquid film on the skin meets those requirements. A humectant is usually included, and the viscosity of the product is controlled by the level of thickener in the water phase.

Cleansing creams are rather different in function from the two products described so far, in that they are specifically formulated to remove soil from facial skin. That soil is of four types:

Sebum residues	(oil-soluble)
Sweat residues	(water-soluble)
Old make-up	(insoluble)
Exfoliated skin cells	

Cleansing creams can be more effective in removing make-up from the skin than soap and water. They must remove all soil and leave the skin in good condition. They may be non-aqueous, water-in-oil or oil-in-water creams, though the third type, with an oil phase content of about 50 per cent., is the most popular. Oil-in-water creams

based on beeswax/borax emulsifiers can invert on the skin to water-in-oil, and are hence particularly effective. The product must spread easily without drag, and the film left on the face must be removable with a tissue. Hence a low melting oil phase is required.

Foundation Creams

Clean dry skin does not hold powder evenly. A foundation cream provides a receptive surface which does hold powder evenly. Foundation creams for use with darker powders are usually pigmented. The product must spread evenly and leave a slightly tacky and matt surface, so a thixotropic consistency is indicated. The film must not be occlusive or over-hydration of the skin may result and the make-up be spoiled by perspiration erupting through it. The foundation cream should prevent absorption of water from the skin by the powder. Oil-in-water emulsions (with about 25 per cent. oil phase) are most common, but water-in-oil creams may be suitable for dry skins. The melting point of the oil phase depends on the amount of humectant—the higher the proportion of humectant the higher the melting point can be. The result should be a slightly tacky film at body temperature.

It is a technical impossibility to provide a formula that will function effectively as an emollient, hand, cleansing and foundation cream. The basis of the "all-purpose" cream is that what is an effective emollient for one skin may be an effective foundation cream for another. The most popular compromise type of formula is a water-in-oil emulsion with 35–45 per cent. oil phase with a melting point of around 40°.

All the above creams depend for their action on the formulation of the emulsion itself, that is the balance of oil phase and water phase. Many speciality skin creams depend for their action on the inclusion of special ingredients. Sunscreens contain ultraviolet absorbers; antiseptic hand creams contain germicides; depilatory creams contain keratolytic agents such as thioglycolates; barrier creams contain silicones or other film-forming materials, and so on.

No attempt has been made to discuss details of formulation in terms of specific raw materials. The aim has been rather to point out certain basic principles of formulation which are generally applicable. It is of the first importance that the functional and subjective consumer requirements should be clearly defined, and that experimental formulation should be carefully directed towards fulfilling these requirements.

(Specific formulations are discussed in Chapter XIII, "Handbook of Cosmetic Science" (Ed. H. W. Hibbott), Pergamon Press, 1963, and "Modern Cosmeticology," Vol. 1 (R. G. Harry revised J. B. Wilkinson), Leonard Hill (Books), Ltd., London, 1962.)

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Cosmetics à la MODE

How make-up will echo the fashions this Autumn and next Spring

SHIRLEY LEWIS

WHAT is the real autumn make-up trend following on the Paris fashion collections? The answer—leaving out the gimmicks, such as showing no eye-liner, as one Continental house attracted notice by doing—seems to be: No dramatic change, but rather a gentle evolution from the natural look seen everywhere during the summer.

"NATURAL" LOOK HEIGHTENED

The general feeling among cosmetic houses in Britain is that, to off-set the stark line of trouser suits—the big autumn fashion trend—faces will need a slightly more heightened version of the natural look. That means skin given a believable, pale honey, or slightly bronze glow from tinted foundation and powder, and there should be plenty of sales in the honey-tan, *café-au-lait* and creamy beige type of shades.

EYES THAT FLUTTER

The trouser suit fashion calls for heavy emphasis on the lashes—the longer and more fluttery the better. That call spotlights lash loaders, the comparatively new lash-building mascaras, as the shortest cut to "lashings of lashes" so far as most women are concerned. Eyeshadow for the autumn fashions is more muted, applied as a gently arched blend of two colours in pastel greys, browns and soft greens, or blues.

MOUTH GLOSS

The mouth has plenty of gloss, with gold-pink, tan-pink, warm peach and more intense true coral shades as a perfect foil for the natural look.

HAIR-DO'S AT HOME

Hair in the United Kingdom is well on the "short back and sides" wavelength of Paris. And as these neat, sleek and short hairstyles require frequent cutting—and incidentally bigger hairdressing bills—to keep them immaculate, there could be a trend to more home setting, with a further rise in sales of home hairdressing products. In tune with this thinking Lambert Chemical Co., who manufacture the Poly range of hair products for home use, have just produced a 71-p. glossy book for women who want to achieve professional results at home.

Called "Hair Beautiful," it covers every aspect of home hairdressing, in-

cluding styling, setting, colouring and perming. The book is being offered at 2s. 9d. (against the cover price of 7s. 6d.) to users of Poly products. A spokesman of the company said that "More and more women—especially the younger age group—are becoming skilled at doing their own hair, and we have set out to give them the best possible professional advice."

A CHANGE NEXT SPRING

Looking ahead to the Spring of 1965 some of the main fashion and beauty trends are already apparent. *Vogue* magazine has already decided on a "porcelain look" spring and there is every expectation of seeing the lovely, clear, translucent colours normally seen on expensive china translated into lip, mouth and nail shades.

Fashion houses will be producing clothes that echo the porcelain mood with lots of beige and pale prints and delicate, porcelain pinks and blues instead of the more brilliant turquoises and shocking pinks of last spring.

In turn the porcelain colours will call for more balance between eyes and mouth, not quite such a heavy eye make-up, and more warmth on the mouth. That in turn means a more beige make-up and slightly stronger colours in lipsticks in the pink and apricot tonings. Cosmetic houses in general believe that lipsticks will be a little deeper in colour next year. Revlon International Corporation plan to bring in some new lipsticks at the beginning of the year that will be "slightly deeper"—but not dark—in the pink and brown end of the spectrum. They also plan to market for nails some "fingertip tints" that will be on the tawny side.

Innoxa (England), Ltd., believe that the new year will show a movement away from the pale "bleached" lipsticks to slightly more brilliant pinks and tans.

LIP SERVICE RESUMED

It seems clear that, although Britain is still stuck with the no-lipstick look that swept France and Italy especially and then caught on among young Westerners everywhere, the cosmetic houses now hope gradually to reverse that trend. They may be expected to use every art of colour, texture, fragrance and presentation to woo back their old consumers.

MORE INTEREST IN MEDICATION

So far as New Year trends are concerned there is likely to be further interest in medicated cosmetics (Revlon are producing a new medicated toning lotion to tie in with their Natural Wonder medicated cosmetics). Now that medicated cosmetics are more aesthetically appealing, and are losing their dreary "patent medicine" image through better and prettier packaging, they are appealing more to the girl with skin problems. Technical improvements may be expected in anti-wrinkle lotions in the new year. Such products are at their most efficient on naked skin, but naturally they are used during waking hours—when women are on show—along with usual foundations and powders.

To some extent, however, make-up is incompatible with those lotions in that it tends to reduce their efficiency. So the next logical step is to produce a tinted foundation that incorporates an anti-wrinkle lotion. Experiments along those lines are already being done.

Another probable development is cheaper synthetic anti-wrinkle products. Beef albumin, at present used, is expensive. So experiments are being carried out with synthetics, and they should result in bringing down the cost and widening the market.

LASHINGS OF IMPROVEMENTS

It seems certain also that in the new year technical improvements will come in lash loaders, the comparatively new lash-building mascaras that have already been mentioned. Although the product appeal is good—most women would like to have longer lashes—the lash loaders themselves still lag behind the ideal, and in most cases fail to get anywhere near their promises. If they can be technically improved, made much more efficient, as seems likely, improvements should be reaching the market some time in 1965.

NEW AREAS TO EXPLOIT

Looking further ahead even than next year, one cosmetic chemist has been pointing out the body covers a much larger area than the face, and has many more imperfections. And whether or not a topless trend develops, low *decolletages* are in fashion, and no doubt someone will bring in new cosmetics for any additional areas that may come to be exposed.

Barrier Creams and Cleansers

K. B. Alberman, M.A., Ph.D., A.R.I.C.

BARRIER creams are now firmly established as a technique of recognised value in the protection of the skin of workers from irritant substances encountered in industry. Like any other method of protection, however, they have their limitations, and should therefore be considered in conjunction with other methods of protection if such are available. It is important to realise that barrier products may often be used by unskilled or semi-skilled workers, and that they are often regarded, wrongly, as a substitute for other methods of hygiene.

Nature of Protection

It is inherent in the description "barrier cream" that the product should act as a barrier against external irritants, but it is now known that, in a large number of cases, the value of barrier creams in reducing dermatitis, as shown in practice, cannot be deduced on the basis of experiments designed to show the ability of a film of barrier to resist penetration by various harmful substances. Many laboratory tests in which films of barrier cream, supported on filter paper, etc., have been challenged with oils, acids, alkalis, have shown that those creams put up little resistance to the penetration of the irritant substances. Even clinical tests show

that barrier creams seldom offer much protection from known sensitising agents, and indeed any sufficiently sensitive test shows that small quantities of an irritant can pass through a film of barrier cream.

Because of the somewhat negative results obtained when barrier creams are subjected to clinical and laboratory tests, some doctors have become sceptical of their efficiency, and it is now suggested that the mode of action by barrier creams is, in fact, one in which there is no question that they are required to form an impregnable film over the surface of the skin.

Augmenting Existing Defences

The explanation of the mode of action of barrier creams that is here being put forward relies simply upon their value as an augmentation of the natural defences offered by the skin. The part of the skin principally concerned is the horny layer, or stratum corneum, which consists of cells in various stages of cornification. The cells may be imagined as bricks comprising a wall, the spaces between the bricks being filled by the natural skin secretions, namely sebum and sweat. The correct balance of the natural secretions enables the skin to maintain its elasticity in the face of wide variations

The author, after commenting on the established place that barrier creams hold in the available methods of skin protection, discusses modifications to the attitude to be taken to them in the light of recent developments in the field of skin cleansers, and considers the future of both skin cleansers and barrier creams, as well as of other related products.

in its external environment, and the principal means whereby the skin may lose its elasticity are the various ways in which the natural lubrication effected by the sebum can be exhausted. The lubricant system can be emulsified by soaps or detergents, or dissolved by organic solvents. There are also chemical substances that may directly attack the keratin or horny material of which the skin is formed, since the chemical structure of keratin is relatively sensitive to the action of quite a wide variety of substances.



Above: Oil acne showing the distended sebaceous glands. At right: A badly cracked hand showing dirt ingrained into the skin fissures. Industrial skin care will break the vicious circle whereby ever harsher cleansing methods are resorted to to clean dirt from fissures caused by the harshness of the cleansing methods.





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CLEANSING AND TONING Liquefying Cleansing Cream from 5/- Special Dry Skin Cleansing Cream from 5/-
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ALL PURPOSE CREAM English Complexion Cream 6/7 POWDER BASES Foundation Cream 5/5

Feather Foundation (*in seven shades*) 5/10 Moisture Tint Foundation (*in seven shades*) 6/10

SKIN CARE

by
Anne French

TRADE MARK

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The latest addition to the Anne French range. This moisture cream cleanser is formulated especially for dry complexions and those which are not so young. It may also be used under make-up to give extra protection against the drying effects of both cold winds and hot sun.

RETAIL PRICE

3/6 per tube



RETAIL PRICE

bottle

2/-, 3/6, 7/-



Both these products are being regularly advertised on television and in newspapers and magazines—
KEEP 'ANNE FRENCH' ON DISPLAY.

It is believed that the effect of a barrier cream is to act as a replacement for and an addition to natural sebum, and that it can be sacrificed to the attack of the various agents described above without exhausting the ability of the skin to replace natural sebum, since the manufacture of that substance can often become inadequate if the skin is degreased too rapidly or too often.

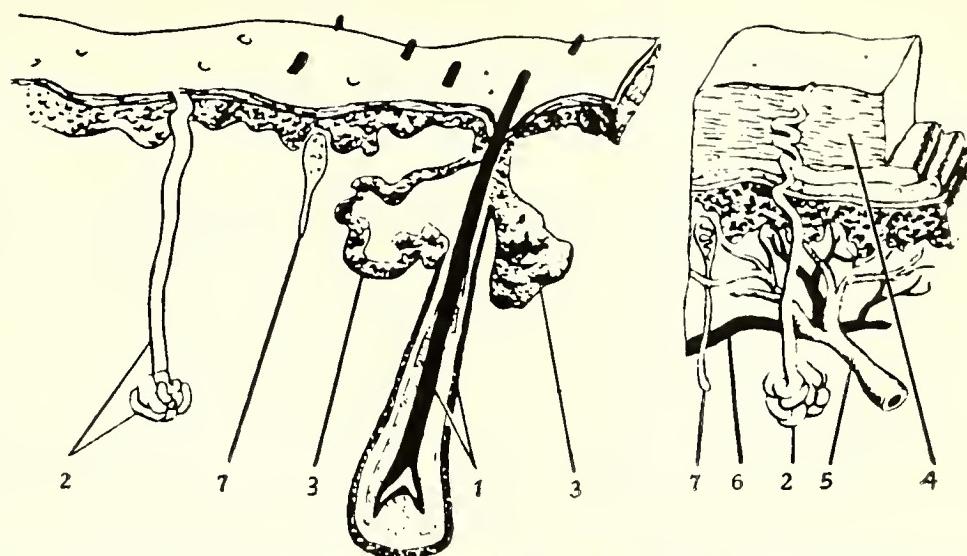
It is now proper that the relationship between the two main classes of barrier creams (water-soluble and water-repellent) should be re-examined. Water-soluble barrier creams do not fit in with the explanation of the mode of action of barrier creams just discussed, since any materials such as detergents and aqueous solutions are going to remove the barrier cream just as effectively as the natural skin secretions. While it is true that the water-soluble creams do have some resistance to the attack of non-aqueous solvents, it is felt that their chief contribution to skin health is that they facilitate cleansing by filling the interstices of the horny layer of the skin with a water-soluble material that can "lift" superimposed dirt and grime. In the same way as the amount of washing and scraping to clean the skin may be drastically reduced, so the process of exhaustion of natural skin secretions is slowed down.

Water-soluble barrier creams find their main application, therefore, in processes and conditions in which water or aqueous solutions are not encountered, and under such conditions the combination of aid to cleansing and protection afforded can be valuable. An example of a well proven cream of this type is Kerodex 55. Although, in normal circumstances, a life of around three hours may be expected for water-soluble products, it is clear that, under conditions of high temperature and humidity, in which the skin may sweat freely, the life of the product tends to be limited.

Water-repellent creams do not, of course, have the cleansing action associated with the water-soluble types, but are better able to resist sweating. It is obvious that, since all the special-purpose and general-purpose skin cleansers contain water as part of the formula, they cannot be used in association with a water-soluble barrier cream, but there is justification for the use of a water-repellent cream since, in addition to providing protection from substances handled, such a cream also mitigates any degreasing effect of the skin cleaners themselves.

Tailored Formulations

Specially formulated skin cleansers are now assuming increasing importance, since so many of the products handled in industry are not removed from the skin by traditional cleansing methods. For example, soap and water



Left-hand diagram represents a section through skin of scalp, showing a sebaceous gland and hair follicle. Right-hand diagram represents a section through palm of hand, showing increased thickness of horny layer as compared with that of the scalp.

1. Hair follicle and shaft. 2. Sweat duct and gland. 3. Sebaceous gland. 4. Horny layer. 5 & 6. Artery and vein. 7. Tactile body (nerve ending).

is totally ineffective in removing many partly cured synthetic resins, despite the fact that many companies selling such resins advocate washing with soap and water as part of the general hygiene precautions. Faced with that problem, the average worker either waits for the resin to harden completely, and then picks or pulls it off the skin—a process which removes the outer layers of the skin as well—or resorts to washing in a mixture of organic solvents that is almost invariably contaminated with dirt of all kinds. For this type of application waterless hand cleansers are now becoming increasingly popular. The name implies that no water is required in conjunction with their use, since they are formulated as aqueous emulsions containing sufficient water to emulsify the dirt removed by the solvent phase of the emulsion.

Apart from their effectiveness, such products have other advantages. They are non-inflammable and can be used at the work bench without the worker having to stop work to go to the nearest washing point when his hands become too heavily contaminated. Unlike ordinary solvents, the waterless hand cleansers do not spread the contamination further over the skin, nor is their degreasing action sufficiently severe to cause skin damage in this way. Ideally, these products should be formulated as solvent-in-water emulsions, so that water rather than solvents is in contact with the skin when the product is applied to it. A well formulated product of this kind is KeroCleanse 22 resin-remover cream, which is successfully used in conjunction with Kerodex 71 water-repellent barrier cream for general work with epoxy and polyester resin systems.

In the future, specially formulated skin cleansers should play an increasingly important part, and the use of water-repellent barrier creams will also

become more popular. The importance of correct procedures in skin cleansing needs to be strongly emphasised, since it is held that much damage to skin, which can lead to chronic skin disease, is associated with bad cleansing techniques that destroy the normal protection the skin itself offers.

Barrier Cream Bases

Barrier creams do not fit into the usual classification of pharmaceutical ointments, since the latter are normally vehicles for active ingredients, whereas activity of the former resides in the whole of the formula, i.e. the active ingredients and the vehicle are one and the same thing. It is nevertheless possible to use barrier cream bases as vehicles for certain active ingredients, when those ingredients are required to exercise a purely topical effect and do not have to be absorbed into the skin. Examples are creams giving protection against ultra-violet light, where barrier cream bases offer a superior vehicle for an organic sun screen, owing to their persistence on the skin and the slow loss of the active ingredient.

Barrier creams, containing organic sun screens, find application in work involving exposure to sunlight in the presence of sensitising substances, such as tar and certain agricultural chemicals. Barrier creams containing antisepsics are also of value in protecting certain materials being handled by a worker from the bacteria already present on his skin, and that application is of particular interest to factories handling food products. There the barrier cream exercises a twofold function, since it mechanically seals bacteria present in the skin in such a way that they are not readily transferred to the work being handled, as well as containing an antiseptic agent capable of sterilising the skin whilst the cream is being worn.

Men's Toiletries an expanding market

CHEMISTS THE GAINERS

IN days of constant change, such as the present, new products of every description continue to emerge. They are hopefully designed to fill a gap either individually or as a group. Not all succeed. In the toilet preparations field probably the most successful introductions over the past few years have been among products specifically for men. No other category has produced such a pronounced boom. From a dismal, almost "Christmas-only" business in the early '50s there has been a quick growth to an established year-round market, with a big Christmas peak, and retail sales graph soaring higher and higher.

Some years ago men's toiletries were few in number and ranges of related products were almost non-existent. Today, however, the extent of the leading ranges is becoming all-embracing for a man's needs. One leading manufacturer lists five types of shaving product for wet shavers, as well as two versions of pre-electric shave lotion; deodorants in spray, cream, stick and roll-on forms; body and after-shave talcum powders; hair creams, tonics and shampoos, as well as the leading seller of after-shave lotion.

Problems of Selection

The problem that faces the retailer is whether all those products are necessary, or whether they might become dead stock on his shelves. The market has been built up over the past few years by the extensive and energetic marketing operations of makers like Shulton, Yardley, etc. The outcome is a market consisting of men, particularly young men, who now accept that the full range of men's toiletries is something they can aspire to.

About one in five of all men of "shaveable" age today have after-shave lotion in their home. They enjoy and are well satisfied with its use and the trend is now for the once "special-occasion" user to become a "regular."

It is significant that the use of other toiletry items such as deodorants almost doubles itself amongst men already using a well-tried and favoured after-shave lotion.

A 1962 survey showed that only one out of every ten British men used a deodorant, and that the most popular form of application was the stick. It is doubtful if a roll-on deodorant for men could ever achieve large sales in the U.K., as its popularity in the U.S.A. is closely related to the fact that many American men shave under the arms—a habit that is unlikely to develop in Britain.

More Sales to Men

Expanded sales of men's purchases of deodorants over the next few years are likely to be made by products marketed specifically for men, and forming part of ranges of male toiletries. British men in particular are reported to have a strong resistance against a product that is used by both sexes. A man prefers a masculine freshness to a fragrance having a feminine note or even to an unperfumed product. The toiletries market for men is only now getting under way, and deodorants may be expected to assume a major portion of it.

In terms of market development the future is exciting. Today's youth are the mass consumers of both today and

tomorrow. A census taken at a public school at the end of 1963 revealed that, among forty-three sixth formers, thirteen used Old Spice after-shave lotion, eight used products by Yardley and Max Factor; and there were three users each of Aqua Velva, Corvette, Toni, Imperial Leather and Cedarwood. Thirty-nine shampooed their hair. There will be a steady increase of use in most types of toiletries now available, and in a few years' time the first-time users will be influenced by their "elders," who are today's youth.

Pharmacies the Right Purchase-place

From the pharmacist's viewpoint the important factor in the growth of the market so far has been the faith which manufacturers like Shulton have placed in the pharmacy as being the right type of outlet. The potential customer knows that he can find the type of preparation of his choice in an atmosphere of classless quality where the professional advice of the pharmacist and his staff can be depended upon.

When a man buys a talcum, after-shave, pre-electric shave lotion, or other grooming products he is making a personal purchase for his own enjoyment, not for outward show. He will therefore want the best and be happy about the price: A suggestion that he might be happier with a product at a much lower price might well produce the same blow to his ego as being cut by a pretty girl. By contrast he warms to the evident good judgment of a salesman who rates him a customer for the "tops" product.

How different from trends in other spheres! What man is seen to browse round the supermarket shelves for personal products? Chemists should be alive to the part they are playing in the growth of this market and the opportunities it holds for the future.

Changes That Must Come

More changes are bound to come. Price maintenance in the grocery trade has disappeared and much has been said about the future of retail prices and the effect of legislation on prices and profits in pharmacies. The real growth in men's toiletries business has taken place in chemists shops at controlled prices. Certain manufacturers have already declared their intention to continue to maintain prices within the regulations, which means that, so far as their particular products are concerned the pharmacist's profit is assured on a vital part of the Christmas gift business. Retail pharmacists are well used to the advantage they gain from manufacturers' advertising, and in the next few months the advertising for men's toiletries will be at a higher rate than ever before.

The boom continues. There are new entrants into the market, which has not always been the easiest in which to make headway for those coming in for the first time. Many mistakes have been made, and the success of the newer products at any time will depend on how well the manufacturers understand the real needs of the modern male. It is not enough for men's toiletries to be well formulated. Packaging, pricing and emotional appeal must fit happily into a business in which the chemist has a major part to play.

Dermatological Problems in Hospital Pharmacy

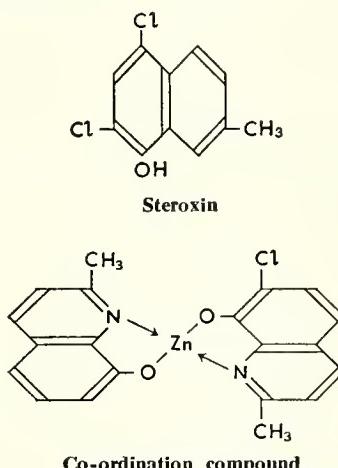
J. W. HADGRAFT, F.P.S., F.R.I.C. (Chief Pharmacist, Royal Free Hospital)

MANY of the recent advances in local dermatological treatment have involved the use of proprietary products. The new topical steroids such as triamcinolone acetonide, fluocinolone acetonide and betamethasone valerate are available only in proprietary formulations, and the substances themselves are not generally available to hospital pharmacists. In other instances systemic treatments have reduced the necessity for treating skin diseases locally. Most notable has been the introduction of griseofulvin for the treatment of ringworm infections. However, fungal infections, particularly those of the nail bed, still demand the use of local therapy to supplement oral treatment with griseofulvin. Such infections continue to give rise to a demand for vehicles capable of assisting the penetration of active fungicides into the skin and nails.

Extemporaneous Preparations Still Needed

Despite the increasing use of proprietary preparations, the practice of dermatology still calls for a good deal of formulation and extemporaneous preparation in hospital pharmacy. Many dermatologists continue to use established formulas and often wish to modify the properties of existing preparations in accordance with the specific needs of the individual patient. Instead of resolving the practical difficulties of the hospital pharmacist, the availability of proprietary formulations has created new problems. Not infrequently the dermatologist may wish to modify the strength of an available preparation or to mix it with other active ingredients or vehicles. In the absence of knowledge of the base used by the manufacturer, unforeseen incompatibilities may arise when the pharmacist attempts to dilute a proprietary formulation with one of the official bases such as oily cream or aqueous cream. It is unwise, therefore, to mix a proprietary product with an official base unless it has been ascertained from the manufacturer that his preparation is compatible with the proposed diluent. An example of an incompatibility of that kind occurred when a prescription called for a mixture of Steroxin ointment and zinc cream. After standing for some time,

the resulting cream turned bright yellow, and analysis of the mixture indicated that the Steroxin had formed a co-ordination compound with the zinc in the cream.



In that example, the incompatibility produced a visible change in the preparation, but other changes might affect the activity of a preparation without necessarily becoming evident in the appearance of the product.

Other problems arise in hospital pharmacy because of the necessity of storing relatively large quantities of official preparations in bulk containers. Oily cream, B.P., is particularly liable to separate on storage. It has been suggested that better results might be obtained if the wool alcohols contained an antioxidant to prevent oxidation on storage and were kept as a solution in liquid paraffin rather than as a solid. Even using that modified technique of preparation, oily cream is still liable to separate when stored, particularly during the summer. A recent investigation has indicated that the addition of auxiliary emulsifying agents considerably increases its stability. The combination producing the most satisfactory results is Tween 80, 1 per cent., Span 80, 1 per cent., and glyceryl monostearate, 4 per cent. It should be noted that the edible grade of glyceryl monostearate was used and not self-emulsifying monostearin, B.P.C., which contains soaps and promotes the formation of oil-in-water emulsions.

The use of new materials in ointment and cream bases brings with it additional problems to be solved. Macrogol ointment is liable to have a variable

consistency because of differences between batches of hard macrogol. Some samples produce a relatively hard ointment, and the amount of liquid macrogol may need to be increased in order to obtain a product of the right consistency. In the absence of official standards for the consistency of ointment bases, a useful practical test is to determine the ease with which the product extrudes from a 15-gm. ointment tube. Bases containing macrogols are liable to harden on standing, and the preparation should be kept in tubes for 24-48 hours before testing it for extrusion.

Container Problems

Containers for dispensing dermatological preparations also sometimes produce difficulties. Waxed cartons are insufficiently waterproof for dispensing aqueous and oily creams. Collapsible tin tubes are generally the most satisfactory containers but are inconvenient for extemporaneous dispensing and are expensive. Screw-capped glass jars may be used, but care should be taken to ensure that the inner wad of the screw cap is made of waterproof material or treated to render it impervious to moisture. In recent years plastic containers for ointments and creams have become available, and they offer certain advantages. Made of polystyrene, they are generally satisfactory for ointments prepared with a greasy base. They may also be used for aqueous or oily creams, but more information is needed on their suitability for such preparations. There is some evidence that phenolic compounds (for example coal tar) may be absorbed from aqueous creams by polystyrene containers. Iodo-chlorhydroxyquinoline may also be taken up into the plastic. The amount absorbed may not be significant in a period of about one month, which is the usual time for dispensed preparations to be in use. However, prolonged contact with polystyrene can significantly affect the composition of aqueous creams containing either of those classes of compound and related substances. The possibility of the plastic yielding impurities to the preparations also needs attention, since many substances used in the manufacture of plastic materials are potential skin sensitizers.

"Probably the most popular prescription in dermatology."

Calamine Lotion

A hardy perennial in the field of formulation

R. WOODFORD, B. Pharm., M.P.S.

FOR its cooling, soothing, antipruritic and mildly antiseptic properties calamine has become one of the most widely known pharmacopœial preparations and "probably," as one publication has it, "the most popular prescription in dermatology." Yet it presents something of an enigma, continuing to offer a challenge to the art and science of pharmacy.

Calamine was used by the ancients as a source of zinc in the manufacture of brass, the ore occurring naturally as the carbonate and silicate. The word calamine seems to be derived from *cadmia*, or *cadmea*, itself perhaps taken from the name of the early mineralogist Cadmus, or the Latin "calamus"—a reed—because of the occurrence of the mineral in masses somewhat resembling a bundle of reeds.^{1,2,3} By the Romans calamine was valued not only for its importance in metallurgy, but also for its effects as a drying, soothing and healing agent in medicine, in which province it is still popular 2,000 years later.

For medical use in the eighteenth and nineteenth centuries the zinc carbonate was commonly accepted. The native calamine was, however, found to vary in quality, and what was offered as calamine was on occasion some other material, often largely composed of barium sulphate.⁴ Those reports led to suggestions that the natural product should be replaced by an artificial zinc carbonate⁵ or zinc oxide,⁶ appropriately tinted with red oxide of iron. Today, the British Pharmacopœia defines calamine as a basic zinc carbonate coloured with ferric oxide. The official product in the United States is zinc oxide with a small proportion of ferric oxide. Both pharmacopœias include a calamine lotion, but it is difficult to say with accuracy when such a preparation was first used. A calamine and zinc oxide lotion was included in the 1873 edition of the University College Hospital Pharmacopœia (the calamine being employed to give the lotion a flesh colour⁸) and in the North American formularies of the early years of the present century.⁹ Calamine lotion was included in the British Pharmaceutical Codex, 1907, and became official in the fifth edition of the U.S. National Formulary in 1926. The B.P.C. also contained a pigmentum calaminæ, a preparation of higher solids content. Both products retained their places in the editions of 1911 and 1923, but only the lotion was official in the B.P.C., 1934. In that edition the proportion of calamine to zinc oxide was increased from 2:1 to 3:1, and that proportion held when the lotion was admitted to the B.P., 1948, the only change being that distilled water replaced rose water as vehicle. The changes made in subsequent editions of the Pharmacopœia are but a small reflection of the work carried out on calamine lotion, justifying the words of the subtitle to this article—"a hardy perennial in the field of formulation."

Pharmaceutical Aspects of Formulation

The pharmaceutical properties of the ideal preparation of calamine are ease and simplicity of preparation, inertness of suspending agent employed, conveniently pourable consistency, and uniform distribution of the insoluble powders present. Dermatological requirements include maximum covering power, absence of grittiness and irritation, rapid drying with maximum adherence to the skin, and absence of a sensation of heat following application.¹⁰ Of those factors the maintenance of adequate suspension on standing has been the most thoroughly investigated, and a variety of natural and artificial substances, alone or in combination with each other, have been employed for this purpose.

VEGETABLE GUMS AND MUCILAGES.—Of several mucilages of gums tried, acacia, tragacanth and karaya have proved unsatisfactory at the concentrations employed.¹¹ The use of ispaghula husk mucilage has been suggested in India,¹² and as a suspending agent for calamine,¹³ Kraystay (a dehydrated gelose extract of Irish moss made by Kraft Food Co.) is employed. Sodium alginate has been found useful, but there have been complaints that lotions made with that substance as sole suspending agent are not suitable for use on the skin, causing a too pronounced film formation.¹⁴ The poor "spreadability" of alginate preparations has been improved by the inclusion of a wetting agent.¹⁵

CELLULOSE DERIVATIVES.—Goldstein¹⁶ developed a formulation that included 2 per cent. of sodium carboxymethyl cellulose (medium-viscosity grade) as a suspending and film-forming agent, and 0.065 per cent. of dioctyl sodium sulfosuccinate [sulphosuccinate] (aerosol OT) to facilitate wetting and spreading. The preparation had desirable pharmaceutical and dermatological properties, and the "Goldstein formula" appeared in the U.S.P., XV, page proof, its omission from the pharmacopœia itself being apparently due to a misunderstanding concerning the manufacturing technique employed.¹⁷ Other combinations of wetting agents with sodium carboxymethyl cellulose have been advocated (for example Tween 20) because formulations containing dioctyl sodium sulphosuccinate develop an objectionable odour on standing.¹⁸ Though it is excellent for extemporaneous preparations, other surface active-agents may be preferable for lotions submitted to prolonged storage.¹⁹ In this country, Etchells used di-isopropyl naphthalene sulphonate, a substance of low foaming activity, as wetting agent.²⁰ Though never used officially for the purpose, sodium carboxymethyl cellulose remains one of the foremost suspending agents investigated for calamine lotion. It is included in at least one proprietary preparation.

Formulas containing methyl cellulose have been examined,²¹ and here again wetting agents improve the spreading properties and permit a reduction in the amount of suspending agent required.²² Hydroxyethyl cellulose (Cello-size WP 4400 of the Union Carbide Chemicals Co.—U.K. agents Union Carbide, Ltd., 8 Grafton Street, London, W.1), has more recently been investigated,²³ 1½ per cent. producing a satisfactory preparation when substituted for bentonite in the U.S.P. lotion.

POLYETHYLENE GLYCOLS AND DERIVATIVES.—The use of polyethylene glycols and derivatives of them arose during the search for a preparation of cream-like consistency. A neutral soap suspension of stearic acid and triethanolamine was described as "an excellent vehicle,"²⁴ but the incompatibility of zinc oxide with soap emulsifying agents was pointed out. Combinations of cetyl alcohol with sodium lauryl sulphate were then suggested.^{25,26} Those vehicles did not receive large support, but work by Nadkarni and Zopf¹⁰ using polyethylene glycol 400 monostearate as suspending agent, with polyethylene glycol 400 as levigating agent, led to the adoption of a modification of their formula in the U.S.P., XIV. The resulting lotion had many desirable properties, but soon became the subject of criticism. Variations in the rate of settling of the powders were due to variations in the samples of monostearate used, and increasing the content of the latter from 2 per cent. to 4 per cent. when phenol was added prevented the decrease in viscosity and consequent separation which otherwise took place.²⁷ One explanation of that phenomenon was that the ester tended to dissolve in the phenol rather than form a gel. Stanko and DeKay¹⁴ suggested that a disruption of the micelle formation by phenol, with consequent change in the colloidal charge, causing the powders to aggregate, would account for the observed results. Because of the incompatibility with phenol, the problems encountered in large-scale manufacture, and the difficulties found in pouring the lotion, the formulation was not included in subsequent editions of the U.S.P.

A recent paper²⁸ describes the use of Polyox resins (polyethylene oxide water-soluble resins of the Union Carbide Chemicals Co.) as suspending agents. Preparations made with them showed less sedimentation than the official lotion and could be applied more easily to the skin, but were likely to form a "rubber-like substance" on the addition of phenol.

SUSPENDING AGENTS CONTAINING SILICON.—Silicon-containing suspending agents may be divided into two groups—silicates of mineral origin, and purified silicon dioxide. (a) *Silicates of Mineral Origin.*—The most important silicate of mineral origin is bentonite, first mined in the Fort Benton region of Wyoming, and defined by the B.P. and U.S.P. as a colloidal, hydrated aluminium silicate. About 90 per cent. of its composition is Montmorillonite, a family of clay minerals named after its location in Montmorillon, France.²⁹ Bentonite was suggested as a suspending agent for calamine lotion in the 1930's,^{30,31} and 40 per cent. of a 5 per cent. magma (slurry in water) was included in the formulae of the United States N.F., VII (1942) and U.S.P., XIII (1947). Ohmart and Stoklosa³² emphasised that the official lotion was too thick to pour easily, and recommended a reduction of the magma to 25 per cent. That amount was included in the U.S.P., XV (1955) preparation, but permission to increase the content to not more than 40 per cent. was given in 1956, and the current U.S.P., XVI permits that amount of leeway in the proportion of suspending agent employed.

The B.P., 1953, included 3 per cent. of bentonite, but there were complaints that the lotion was difficult to pour from narrow-necked bottles and that it frothed excessively on shaking. Armstrong and Fenton³³ suggested that the addition of sodium citrate would obviate the undesirable bixotropic nature of the preparation, producing a more fluid product without an increase in sedimentation taking place. The inclusion of 0.5 per cent. sodium citrate for

that purpose was sanctioned by the B.P. Addendum of 1955, and the modified formula is the present official preparation.

Veegum (R. T. Vanderbilt Co.), a complex magnesium aluminium silicate, has been found satisfactory either alone³³ or in combinations with other suspending agents or wetting agents.^{31,34} Hectorite, a white clay from Hector, California, is related to bentonite, but has a high magnesium content with little aluminium; some analyses show the presence of lithium and fluorine.³⁵ A purified sample of hectorite was reported to be a more effective suspending agent than bentonite for mixtures of calamine and zinc oxide.³⁶

(b) *Purified Silicon Dioxide.*—An aqueous suspension of microamorphous silica appeared to be superior to bentonite magma in calamine lotion, U.S.P., so far as maintaining suspension was concerned,³⁷ but Whittet³⁸ reported that the addition of silica to the British lotion results in the liberation of carbon dioxide. Recent studies with an extremely pure silicon dioxide of particle size range 15–20 mμ, available in the United States as Cab-o-sil (Cabot Corporation), have led to conflicting reports on its usefulness.^{39,40}

ELECTROLYTES.—Electrolytes have been employed to retard the sedimentation of the powders present in calamine lotion. The U.S.P., XIII preparation was improved by the addition of several salts, especially potassium bitartrate,⁴¹ but it was not clear if the salts were affecting the suspended powders or the bentonite present. Later work⁴² showed that the bitartrates produced a remarkable reduction in the settling rate of 10 per cent. zinc oxide suspensions. A recent paper⁴³ advocated the use of sodium acid citrate solution as a deflocculating (dispersing) agent in calamine lotion but the formula was criticised because an undesirable soluble zinc salt was formed by interaction between the acid citrate and the basic powders present.

A wealth of information exists on the use of suspending agents in calamine lotion, but little attention has been paid to the size of the powders employed. The importance of particle size in pharmaceutical formulation is becoming evident, and further studies in that field are to be expected.

Dermatological Considerations

Calamine lotion must be used with discretion in weeping conditions so as to minimise caking of the powders, and serious chilling should be guarded against when the lotion is used over a large area, especially in infants.⁴⁴ The lotion is used as a vehicle for several drugs prescribed in dermatology, where its lack of skin penetration is an advantage, and a proprietary lotion is available containing an antihistamine which increases its soothing effect.

The B.P. lotion contains liquefied phenol, which is included for its analgesic effect and to inhibit the growth of moulds present in some samples of bentonite.⁴⁵ The presence of phenol has, however, been criticised,⁴⁶ and the "plain" B.P., 1948, formulation may be preferred by some dermatologists.⁴⁷ The U.S.P. includes two preparations, phenolated calamine lotion being prepared by adding liquefied phenol to the normal product.

Prolonged contact with calamine lotion may reduce the bacterial flora of the skin,⁴⁸ and a series of papers by Guth and collaborators⁴⁹ dealt with the formation of hydrogen peroxide in several formulations and its possible contribution to their therapeutic effectiveness.

An attempt to match the colour of the skin by using a combination of red and yellow ferric oxide with zinc oxide (the "cuticolor powder" of Fantus and Dyniewicz⁵⁰) was formerly recognised by the U.S. National Formulary ("Prepared Neocalamine") but it did not prove as popular as the standard calamine-zinc oxide mixture.

In an excellent paper on calamine lotion, Professor DeKay⁵⁰ drew attention to the possibility of still further research in making a preparation that would dry up the open blisters from ivy and sunburn dermatitis, at the same

time preventing the skin from further cracking in the clearing process. Work is continuing in his laboratory with that end in view.

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Any Business Questions?

We find that running a small limited company of four branch shops from the main shop takes up a considerable amount of staff time and an appreciable amount of space (office and stock). The sum to be charged back to the branches by the "head office" is not easily calculated. What is the usual procedure adopted by small companies in assessing such "head office expenses?

No one answer to this question exists. Some businesses make a practice of charging for the work done on stores, at a percentage, say, 1 per cent. or 2 per cent. on the value of the goods transferred to branches. In addition a round sum for head office administration is often charged. That is frequently calculated by estimating the extent to which head offices' costs are increased by work for branches, and apportioning the increase between the branches on, say, a turnover basis. Beyond that rather general indication it is impossible to go without knowledge of the precise facts of particular cases. Your accountants should be able to advise on your individual needs.

I am a director of a company in the pharmaceutical industry. I am provided with a car that cost my company £1,500. It is a high-quality car and its cost to the original owner (not my company or an associate) was £5,000. The Inspector of Taxes in assessing my personal benefit for use of the car is basing it on the figure of £5,000, not the cost of £1,500. Surely this is wrong?

THE Inland Revenue indulge in that practice, but there would seem to be no statutory authority for it. Nor, we think, can it be justified on grounds of common sense or morality. We suggest that you resist the attempt and if necessary go before the Commissioners of Appeal.

Is it necessary to include overhead expenses in a work in progress valuation phase?

THE first thing to be remembered is that whatever basis of valuation is adopted, it should be consistently applied. The question of overheads is one for the director of the individual business. There is a strong case for including works overheads, but for income tax purposes, only the cost of labour and materials must be included following the decision in "Duple Motor Bodies and Ostime."

WISDOM OF THE ANCIENTS: "Beauty culture, a mischievous, swindling, base, servile trade, which creates an illusion by the use of artificial adjuncts and make-up and depilatories and costume, and makes people assume a borrowed beauty to the neglect of true beauty, which is the product of training."—Plato, *Gorgias*.

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Deodorants and Antiperspirants

N. J. VAN ABBE (*Basic Research Manager, Beecham Toiletry Division*)

IN many animal species body aroma has a functional significance, being concerned with individual recognition, sexual attraction and self-defence. In civilised man it has no comparable importance and pronounced body odour is in fact regarded as a social evil. The clean surface of the human body has little aroma, its secretions being relatively non-odorous when collected fresh under laboratory conditions. Odour is mainly generated by the decomposing action of bacteria present on the skin in vast numbers. The principal problem, therefore, is how to prevent the bacterial degradation of sweat. Excessive sweating, an additional source of embarrassment and discomfort, also needs to be controlled.

Perspiration or Eccrine Sweat

The perspiration that is seen as watery droplets on the skin after vigorous exercise or in warm humid weather is secreted by the eccrine sweat glands, which are especially numerous on the palms of the hands and soles of the feet. Eccrine sweat is a dilute aqueous solution (approximately 0.7 per cent. sodium chloride) with traces of other constituents. Its faint aroma is not greatly intensified by bacterial decomposition, though it may become so when certain foodstuffs such as garlic are consumed. Though sweating becomes obvious only in special circumstances, the evaporation of moisture from the body surface is a continuous and vital process, though its main function is in helping to control body temperature, through the latent-heat energy required for the process of evaporation. That regulatory function is subject to nervous (autonomic) control. Every normal person is capable of responding to the physiological requirement of perspiring, but in some circumstances the response seems excessive. An undue tendency to perspire (hyperhidrosis) may cause embarrassment, even when not accompanied by unpleasant odour. Profuse under-arm (axillary) sweating is especially troublesome because there is no ready evaporation from that area, while evaporation from the soles of the feet is liable to be occluded by impermeable footwear. Frequent abundant sweating without evaporation causes

the skin to become macerated and in that state it may succumb to infection by pathogenic bacteria or fungi ("athlete's foot," fungal infection between the toes, is a common example).

A Secretion that Supports Bacteria

Markedly different from the eccrine glands are the apocrine sweat glands prevalent in the axillæ and pubic regions and believed to be more numerous in women than in men. Apocrine sweat is a turbid fluid, more viscous than the eccrine secretion, and it contains noteworthy amounts of protein and proteinaceous breakdown products, as well as carbohydrate (probably glucose) and perhaps some fatty matter. It has little odour when first secreted.

Apocrine sweating plays no part in regulating the body temperature, and in fact does not appear to have any essential rôle. Except that it provides an excellent nutrient medium for bacteria it could well be ignored, but degradation by the bacteria leads to formation of ammonia, amines, indole and mercaptans—principal factors in body malodour.

It is important to consider separately the eccrine and apocrine secretions, with their different nature and functions. In practice, the skin carries a mixture of them and of the fatty sebum derived from the sebaceous glands, which together constitute the normal "mantle" of the skin. Where there is little apocrine sweating the mantle is slightly acidic (owing to the presence of free fatty acid). The acidity is considered to be a natural defensive mechanism against infection, especially by the pathogenic fungi, which thrive in neutral or slightly alkaline conditions. In the axillæ and in other parts in which the apocrine glands abound, ammoniacal decomposition products tend to raise the pH and predispose towards infection.

The typical bacterial population of the skin includes especially the Gram-positive staphylococci and diphtheroids. Gram-positive species such as *E. coli* are less often encountered. The mere presence of those micro-organisms on the skin, even in large numbers, is not usually harmful, and seldom has pathological consequences, but offensively odorous compounds may be generated

in the process of utilising the skin mantle as a source of nutrients. A similar chemical environment exists on the body hairs, especially in the axillæ. Shaving those areas delays the onset of malodour, probably because efficient cleansing is more difficult when the skin is hairy.

Clothing in contact with the skin increase the risk of malodour, and especially of discomfort, by hindering the evaporation of sweat. Moreover fabrics absorb the secretions and pick up bacteria from the skin. They may actually become the sites in which "body" odour develops, even when a deodorant product is being used on the skin itself.

Cleansing the skin frequently with soap and water removes accumulated sweat residues and large numbers of bacteria, enabling many people to maintain an acceptable aroma. Malodour is not necessarily due to inadequate personal cleanliness, for though soap and water remove vast numbers of bacteria from the skin, there remain more than enough to decompose the sweat as it forms; differences in intensity of odour may be due largely to variations in the strains of micro-organisms carried on the skin.

Repeated attempts have been made to develop germicidal toilet soaps capable of sterilising the skin. Such efforts are made difficult by the innumerable crevices in which bacteria can escape the germicide, and by the ease of subsequent re-infection. A necessary attribute of any skin antiseptic is that its inhibitory influence should continue between washings. Hexachlorophene, bithionol and trichloroacarbanilide retain their activity in the presence of soap but are not fully effective even when the cleansing regimen is practised with surgical thoroughness.

Talcum powders tend to overcome the discomfort due to profuse sweating and the retention of excessive secretion on the skin. In part they absorb the secretion and in part provide an increased surface area from which evaporation may proceed.

Deodorant Preparations

Cosmetic products designed to restrain the flow of perspiration are known as "antiperspirants." Those which prevent development of mal-

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odour (without necessarily checking the output of sweat) are referred to as "deodorants." To prevent the odour from developing, all bacterial species capable of decomposing the sweat must be inhibited from multiplying, and the control must be maintained between successive applications. Many germicidal compounds are reasonably effective but produce adverse side-effects that have to be guarded against. Deodorant products are likely to be in daily use over a number of years and in contact with skin that is relatively thin and "sensitive." There is thus a risk either of primary irritation (direct inflammatory response) or of sensitisation (development of an allergic response). The risks apply not only to the germicidal ingredients but to the complete formulation, and great care is required to ensure that the product is safe in use. For example, many well-established active constituents are chemically interrelated and may give rise to "cross-sensitisation"; thus a person who has been sensitised to bithionol may subsequently exhibit an inflammatory response to a product containing only hexachlorophene. Fortunately the deodorant products on the market are hardly ever found to cause reactions of any consequence. Applying alcoholic formulations soon after a hot bath or after shaving the axilla may result in a transient sensation of stinging, but that quickly disappears.

Choice of form of a deodorant—whether "roll-on," stick or spray—is largely a matter of convenience and individual preference, but always it must be formulated to present the active constituents with full effectiveness. As with other types of antibacterial formulation, the product may be submitted to various techniques of laboratory testing, such as the inhibition-zone assay or the serial dilution test.

Perfume serves both to make a deodorant product attractive in the pack and, if suitably devised, to help mask body odour. Theoretically it would be possible to formulate a product that would render odorous compounds non-volatile (and thus incapable of detection by smell) or to convert them into odourless compounds as they are formed, without controlling the responsible bacteria. Ion-exchange resins might be employed to remove certain odorous compounds. That approach, however, has yet to be perfected by the manufacturers.

Antiperspirants

An antiperspirant is a product designed to have local action in checking the flow of perspiration. If it affected a large part of the body surface it would be extremely hazardous, and systemic measures to retard perspiration (for example the use of anticholinergic drugs) would require qualified supervision. From a purely local effect, how-

ever, little harm need be anticipated since the functional rôle of the perspiration process as a whole is not influenced. Local antiperspirants have, in fact, been widely used for many years without evidence of untoward consequences.

Theoretically it is possible to block the orifices at the skin surface without necessarily inhibiting the secretory part of the sweat glands. The conventional antiperspirant constituents are known to be active protein precipitants, and it has often been stated that they function in that way. Blockage of the sweat duct occurs naturally in the condition known as miliaria rubra ("prickly heat") and would be a most undesirable result of using cosmetics. "Astringent" antiperspirants may function by partially restricting the orifices, but it now seems probable that some degree of secretory suppression also occurs. Diminished secretion due to applying atropine and similar potent drugs may be demonstrated iontophoretically, but has not been demonstrated so conclusively in more innocuous antiperspirants.

The active constituents of cosmetic antiperspirant products are generally salts of aluminium. They are powerfully astringent but show marked

acidity in aqueous solution, and that is not wanted. The normal pH range of the skin mantle lies between 5.5 and 6, so an aluminium salt yielding a pH of about 3 is likely to prove irritant in the axillæ. Acidity also tends to damage clothing fabrics in contact with the skin, especially when they are later ironed. Much effort has therefore been expended by cosmetic formulators in developing products that are less acidic. Whether antiperspirants function by blocking the sweat ducts or by inhibiting the secretion is still debatable, but the usual aluminium salts are also active as antibacterial agents and therefore probably have some value as deodorants as well.

A Rôle for the Pharmacist

In the rising living standards of today, people are more conscious of personal cleanliness, and deodorant and antiperspirant cosmetics are becoming almost as essential to daily hygiene for both men and women as toilet soap and tooth-paste. A great deal of attention has accordingly been paid to the careful formulation of effective and safe products for those purposes, and the pharmacist should understand their action and be able to advise on their suitability and usage.

Prescribers'

2025 RELEASE UNDER E.O. 14176

What doctors are reading about developments in drugs and treatments

THE effect of corticosteroids on serum growth hormone (H.G.H) in humans has been studied at the Post-graduate Medical School of London. Results suggest that corticosteroids can interfere with normal H.G.H. production (in response to insulin-induced hypoglycaemia), but that interference may be linked with high or prolonged dosage. (*Lancet*, August 22, p. 376.)

A virus inhibitor, having the physicochemical characteristics of interferon, has been found in acute sera from nine of fifty-one patients with clinical viral infections. No interferon was detectable during convalescence, in healthy adults or in patients with acute bacterial infections. (*Lancet*, August 22, p. 382.)

FROM the results of a pilot study, workers at Aberdeen Royal Infirmary suggest that a 25 per cent. mixture of nitrous oxide in oxygen may be of value as a post-operative analgesic. The mixture could be supplied from a machine or from premixed cylinders. When the mixture was administered after morphine, better results were obtained than with either agent alone. (*B.M.J.*, August 22, p. 480.)

A NEW method for the assay of anti-tumour agents, antisera, hormones, etc., is described in a preliminary com-

munication from workers at the Chester Beatty Research Institute. It uses organ cultures of biopsies from human tumours. (*B.M.J.*, August 22, p. 490.)

Two cases of skin eruptions following administration of triprolidine (Pro-Actidil) are reported in a letter from a worker at the Institute of Dermatology, London. Reaction was more marked in exposed areas thus tending to deny recent suggestions that the drug has a sun-screening effect. (*B.M.J.*, August 22, p. 512.) Pro-Actidil's action as a sun-screen is also examined in *Drug and Therapeutics Bulletin* (August 21). On available evidence it is questioned whether the drug's alleged effect in "various solar dermatoses" should be mentioned in advertisements.

"VALUABLE in the treatment of acute iron poisoning" is a conclusion reached about desferrioxamine B. The compound is the iron-free derivative of an iron-containing hydroxamic acid isolated from cultures of *Streptomyces pilosus* and has a greater affinity for iron than transferrin, the plasma protein responsible for the transport of iron in the body. [Desferrioxamine B (Desferral, CIBA Laboratories, Ltd.) has not so far been marketed in Great Britain.] (*Drug and Therapeutics Bulletin*, August 21.)

MANUFACTURERS' PRODUCTS FOR SKIN CARE

A Companion. — Richard Hudnut, Ltd., Eastleigh, Hants, have introduced Cactus cleanser, a cool, creamy lotion with a light fragrance. Like its sister product, cream of Cactus moisturising lotion, Cactus cleanser contains extract



from the giant, moisture-retaining agave cactus, so that it cleanses and moisturises the skin at the same time. It is claimed to be suitable for all skin types, and is of a consistency that is easy and pleasant to use. Although it gives a deep cleanse, leaving the skin soft and lubricated, it does not give a greasy look. Cactus cleanser is packed in a slim, white polythene bottle which is lettered in black and blue and carrying the cactus motif in blue. It has a chunky, gold stopper.

Creams for Modern Times. — In formulating the range of beauty preparations which they recently introduced, Yardley & Co., Ltd., 33 Old Bond Street, London, W.1, say that they have had much in mind the changing needs of today's woman, whose skin is "getting progressively drier, subject as it is to stresses and strains her mother never knew." Yardley deep emollient cleaner is a flowing deeply cleansing cream containing eleven emollients "while searching out the grime at its lower levels." Infinite Beauty, a moisturising night cream, contains a blend of restorative oils in addition to vitamins A and



E. Lethicin is also employed in the formula to give exceptionally deep penetration. The new powder base, moisture tint foundation, preserves the moisture balance of the skin, while giving "flawless coverage." The range also contains a variety of treatment products including two skin tonics, tonic cleanser and skin freshener, invaluable for balancing the pH factor of the skin to retain the correct acid balance. Each product is now obtainable in a small trial and a large luxury size.

Sun-tan Products. — Two suntan products worthy of mention in the context of skin care are Q.T. lotion and Shade



suntan lotion by Plough, Inc. (United Kingdom), Ltd., 274 Gresham House, Old Broad Street, London, E.C.2. Both products are made to the formulas of the Coppertone Corporation, of Miami, Florida, U.S.A. Q.T. lotion is said to contain Keto-chromin, which is claimed to give the skin a glorious even tan in three to five hours with or without the sun. Another ingredient is Solban, said to be an effective sunscreen, protecting the skin against sunburn while promoting tanning. Shade suntan lotion has been formulated for skins sensitive to the sun, especially children, blondes and redheads.



Above : The distinctive pack of Skinfare (J. & E. Atkinson, Ltd.). Right: The bold design adopted for the pack of Shade (Plough, Inc. (United Kingdom), Ltd.)

Light in Texture, Quick in Action. — In formulating their Skin Deep range of skin care products (introduced in March), J. & E. Atkinson, Ltd., 17 Bessemer Road, Welwyn Garden City, Herts, followed new production techniques to produce creams and lotions light in texture and quick in action.

Formulated to maintain and enhance a young skin rather than repair a deteriorated skin, the products made their entry into the market at a time when lightness, in both colour and texture, were back in favour. The preparations thus suit the mood of the moment. The speed of the recommended routine has appealed to busy women everywhere. A thorough technique, both morning and night, takes less than five minutes a day—an important aspect of the Skin Deep series in the main potential market—the under 35's. Atkinson's Skin-fare, recommended for the mature skin, is a natural skin food containing no controversial hormones and with exactly the right balance of oils and moisture for use on either dry or greasy skin. It is claimed to have also the ability to penetrate to the cell-forming layer, so that new cells are properly fed from birth to the time they reach the surface three weeks later.

Restoring the "Moisture Balance." — The Toni Co (division of Gillette Industries, Ltd.), 100 Brompton Road, London, S.W.3, point out that their Deep Magic dry skin conditioner is an appropriate product for customers whose skin has been exposed to summer sun or winter winds. Deep Magic is an oil-in-water emulsion that helps to restore the moisture content of the skin, and "the protective oil-in-water moisture balance." The conditioner may be used under or without make up and may also be applied as a night treatment.

A Package Problem Solved. — In the summer of 1962 Lentheric, Ltd., 17 Old Bond Street, London, W.1, marketed three Ice-Dew products in a jar of revolutionary design "tailor-made" to suit the products. In a new pack about to be launched they claim to be leading again. All the company's cream products are being repackaged in jars constructed to eliminate the "double shell" that has provoked criticisms from the public. An article "Bottomless



Pots," published in the *Shopper's Guide* in September 1960, was written because a reader had dropped a pot of cream on to a tiled floor, and an inner shell had fallen out that was considerably smaller than the outer case. An investigation was carried out on the jars of all the major cosmetic companies, and the results showed that cosmetic jars could hold anything from 75 to 35 per cent. of what they might have been supposed to hold. The double-sided jars had, of course, been so constructed because rigid plastic, a brittle material,

would not survive being dropped on to a tiled floor, and to give a certain amount of insulation and so contribute in a small way to the stability of the product. The Press took up the cudgels on behalf of the public. The Weights and Measures Bill when passed will ensure that all containers are clearly marked with their net capacity. Messrs. Letheric consider that that will not solve the problem. So they have produced a jar with strengthened base to give protection if the jar is accidentally dropped, and the sides are built into that ridged platform. The double walls have, in effect, been kept by having a lid of the same depth as the jar. The deep lid screws at the base of the jar.

An All-purpose Cream. — Southalls (Sales), Ltd., Bessemer Road, Welwyn Garden City, Herts, claim that chemists asked to advise on beauty preparations can have confidence in the research behind and the medical approval for Nivea products. They point out the economy of using Nivea, an all-purpose moisturising cream suitable both as a night cream and as a light make-up base for daytime use. It is to be noted, too, that men are realising that skin care is essential if they wish to look youthful and well groomed, but do not want highly scented or feminine-looking products. Nivea in its smart but simple blue and white pack is acceptable to masculine taste.

For Teenagers and the Mature. — Acne has always been the bane of the teenager. Just when she (or he) was desperately keen on looking her best, she came out in a crop of spots which nothing seemed to budge, but Menley & James Laboratories, Welwyn Garden City, Herts, claim that Eskamel at last provides an effective treatment. A flesh-tinted, non-greasy cream, Eskamel may be worn under face powder. It is easy to apply, dries within a few seconds, and is as easy to remove with water. For the women with some kind of skin problem — dry, greasy, flaky, patchy, blotchy, pimply — Menley & James Laboratories suggest Aquatheron, an easy to use treatment in the form of a medicated bath liquid. Its formula includes emollients and moisturisers and hexachlorophene 3 per cent. as an antiseptic and deodorant. It is also an ideal facial cleanser. Customers should be warned, however, not to get it in their eyes.

Neutral. — When a neutral soap is indicated, Neutrogena suggests itself to the dermatologist. Manufactured under licence by M. & R. Norton, Ltd., 9 Park Hill, London, S.W.4, the soap is claimed to be three times less irritant than ordinary toilet soap when assessed under test patch conditions. Neutrogena is therefore often used when ordinary soap is contra-indicated as in certain forms of dermatitis. The same inherent characteristics of the soap make it equally acceptable for cosmetic purposes. Neutrogena is also available as a non-alkaline shampoo which leaves no soapy film to dull the hair.

A Quartet. — Arthur H. Cox & Co., Ltd., Brighton, offer sample packs and details on request of four products that are applied to the skin. Cream of lan-

olin is packed in a tube and cartoned, and is a popular remedy for rough and sore hands. Cetrimide cream, also in tubes, is described as "the bactericidal antiseptic of 101 uses." Calamine cream is packed in 1-oz. tube and offered in distinctive and attractive cartons. Another family remedy, baby rub vapour cream, is in 1-oz. jar. The cream of lanolin is issued in the Cox series, but the other products are available in a choice of seven different designs.

Quick and Effective. — Selsun, manufactured by Abbott Laboratories, Ltd., Queenborough, Kent, is a suspension of selenium sulphide claimed to be extremely effective in the treatment of dandruff, a special feature is that, once the symptoms are controlled, subsequent applications are effective for at least four weeks. Packs are bottles of 1, 2 and 4 fl. oz.

Ready to Hand. — A new concept in counter showcards has been produced by Southon Laboratories, Ltd., Howbury House, Thames Road, Crayford, Dartford, Kent, to carry a demonstration tube of their revolutionary pack of Hand-e-cream. The pack is designed



to solve the perennial problem of lost caps and misplaced containers by having a special built-in "car" so that it may be hung in a convenient position near the sink where it is always to hand. Half a turn of the cap allows a quantity of the perfumed cream to escape into the hand; half a turn in the opposite direction seals it again. No lost caps, no spilt containers. To display the unique new pack to its full advantage, the counter showcard that has been produced shows the pack hanging near the kitchen sink, in the position from which it will be used.

Processing. — William Ransom & Son, Ltd., Hitchin, Herts, offer their special facilities to those who wish to market toilet products. The company is able to undertake for trade customers all stages in processing from raw materials to final product, and has available research laboratories and personnel to help in processing problems in the pharmaceutical and related industries.

A Primary Requisite. — Thorough cleansing of the skin is of first importance to beauty care, but the International Chemical Co., Ltd., Chenes Street, London, W.C.1, suggest that deep cleansing means more than a



"quick one-over with soap and water." They are regularly advertising the Anne French range of products which include deep cleansing milk, a finely emulsified cleanser which, besides removing make-up and cleansing the skin thoroughly, is also mildly tonic, stimulates surface circulation and helps to tone underlying muscles. It is particularly good for young complexions and those inclined to over-oiliness. Anne French moisture cream cleanser, the latest addition to the range, is formulated especially for dry complexions and those which are not so young. It is a complete all-in-one beauty treatment which not only deep cleanses, but also remoisturises, lubricates and softens. It is claimed to protect the underlying tissues and discourage lines and wrinkles. The cleanser may also be used under make-up to give extra protection against the drying effects of both cold winds and hot sun. Anne French golden tan is a transparent, light-filtering cream suitable for all skin-types and all ages down to the youngest baby. It makes an excellent protective make-up base that can be used with loose or compressed powder; or, for a heavier make-up, with powder-cream combined.

NEW COMPANIES

P.C.=Private Company. R.O.=Registered Office
BARNANGENS VADEMECUM, LTD. (P.C.). —Capital £10,000. To carry on the business of chemists, druggists, etc. Directors: Tor A. Olsson, Stockholm and Lars T. Olsson, Cologne. R.O.: Moor House, London Wall, London, E.C.2.

BRICHEM, LTD. (P.C.). —Capital £1,000. To carry on the business of manufacturers of and dealers in chemicals, etc. Subscribers: Stanley H. Lucas and Francis A. Dean. R.O.: 6 Surrey Street, London, W.C.2.

CHATER G. CHEMICALS, LTD. (P.C.). —Capital £500. To carry on the business of wholesale and retail pharmacists, etc. Directors: John C. Chater and Robert W. Tiffin. R.O.: 21 New Road, Brentwood.

CURZON DRUG STORES, LTD. (P.C.). —Capital £2,000. To carry on the business of a drug store, etc. Directors: Sheila Mack and Francis W. Marson. R.O.: 15a Curzon Street, Derby.

M. DOBBER, LTD. (P.C.). —Capital £100. To carry on the business of retailers and wholesalers of pharmaceutical goods, etc. Directors: Herbert P. Dobber and Mary Dobber. R.O.: 43 Kingsland High Street, London, E.8.

HARLOW VETERINARY SUPPLY CO. LTD. (P.C.). —Capital £100. To carry on the business of manufacturers of and dealers in animal medicines, etc. Directors: John E. M. Ridge and John B. Carter. R.O.: 13 Park Hill, Harlow, Essex.

TRADE REPORT

The prices given are those obtained by importers, or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, AUGUST 25: The price of IPECACUANHA continued to ease during the week, the Costa Rican and Brazilian varieties being down by one shilling per lb.

MENTHOL was steady at previous levels with the exception of the forward rate for Brazilian which was down six-pence per lb. Belladonna LEAVES, new crop, were being quoted at 3s. 3d. per lb., c.i.f. Lower were PODOPHYLLUM *Emodi* by 5s. per cwt., STYRAX by three-pence per lb., CASSIA *Lignea* by 7s. 6d. per cwt. and Gum ACACIA by 2s. 6d. per cwt. CARNAUBA WAX was dearer by between 5s. and 10s. according to grade and delivery date.

With a few exceptions, ESSENTIAL OILS were unchanged in a dull market. Prominent among the exceptions was BERGAMOT which jumped to 99s. per lb. (from 90s.) for spot supplies. This was the second sharp rise the oil has sustained in a few weeks caused by forecasts of a poor crop in the Autumn through the hot, dry Summer in Italy. Penang PATCHOULI rose a further 3s. per lb. at origin and by 2s. 6d. on the spot, while BOIS DE ROSE was lower by one shilling per lb.

In PHARMACEUTICAL CHEMICALS the price of VITAMIN B₁ received its third boost this year. As reported in April when the first rise occurred, the vitamin had fallen substantially over the years to a level of 105s. per kilo. Now, after three rises (in the case of larger quantities), the price is back to somewhere around the level ruling in December 1962. RIBOFLAVINE has also been advanced during the week by 7s. 6d. per kilo. ZINC OXIDE, B.P., is now at £144 per ton for 2-ton lots, representing a fall of £2 per ton.

Pharmaceutical Chemicals

ACETANILIDE. — Crystals, one-cwt. lots, 2s. 10d. per lb.; 5-cwt., 2s. 9d.

ADRENALINE.—(Per gm.). Synthetic B.P., 1-kilo lots, 11d.; 500 gm., 1s. 1d. ACID TARTRATE, B.P., 1 kilo, 7½d.; 500 gm., 9d.

ALOIN. — Micro-crystalline, 14-lb. lots, 34s. per lb.

ANEURINE HYDROCHLORIDE. — (Per kilo.) One-kilo lots, 118s. 6d.; 10-kilos, 115s. 6d. The MONONITRATE is 122s. and 119s. 6d. for same quantities.

LONDON EXCHANGE RATES

At the opening on Tuesday

Amsterdam...	Florins to £	10-06-10-06½
Bombay ...	Shillings to rupee	1/5½-1/6½
Brussels ...	Francs to £	138-55-138-60
Copenhagen	Kronor to £	19-30½-19-30½
Frankfurt ...	D Marks to £	11-07½-11-07½
Hong Kong	Shillings to \$	1/2½-1/3½
Karachi	Shillings to rupee	1/5½-1/6½
Lisbon	Escudos to £	80-15-80-25
Malaya	Shillings to \$	2-3½-2-4
Milan	Lira to £	1.739½-1.740½
Montreal ...	Dollars to £	3-00½-3-00½
*New York ..	Dollars to £	2-78-2-82
Oslo	Kronor to £	19-95½-19-96½
Paris	Francs to £	13-64½-13-64½
Stockholm	Kronor to £	14-00-14-00½
Zurich	Francs to £	12-03½-12-03½

*Bank of England official limits. Bank rate: 5 per cent. from February 27.

ANTIMONY SALTS. — CHLORIDE, B.P.C., 1934, carboys, 5s. 7d. per kilo; FLAKE, 14s. 4d. kilo.

ASCORBIC ACID.—One-kilo, 41s.; 10-kilos, 37s. 6d. per kilo; 25-kilos, 36s.

BACITRACIN. — Sterile topical is 53s. per mega unit for 25 m.u.

BAIRUM SULPHATE. — B.P., 50-kilo lots, 3s. 9½d. per kilo.

BENZYL BENZOATE. — B.P. in 1-ton lots, 4s. 6d. per lb.

BROMIDES.—Crystals (per lb.):—

	1 cwt.	5 cwt.
POTASSIUM ...	2 6	2 5
SODIUM ...	2 6	2 5
AMMONIUM ...	2 10	2 8½

Powder is three-halfpence per lb. more, packages free, carriage paid terms.

CALAMINE.—Five-cwt. lots, 1s. 11d. per lb.; 1-ton, 1s. 9½d.

CALCIFEROL. — One-kilo lots are from 2s. 7½d. per gm. in standard packages.

CALCIUM CARBONATE.—B.P. light precipitated powder, 1-ton lots, £37 10s. per ton in free bags, ex works.

CALCIUM CHLORIDE. — B.P.C. fused, 2s. 10d. per kilo for 100-kilo lots.

CALCIUM GLUCONATE. — 10s. 6d. to 12s. per lb., as to quantity.

CALCIUM PANTOTHENATE. — 97s. 6d. per kilo.

CALCIUM PHOSPHATE.—B.P.C. is 1s. 5d. per lb. for 1-cwt. lots and 1s. 4d. for 5-cwt.

CHLOROXYLENOL. — B.P.C., 5s. 8d. per lb. for 1-cwt. lots; 5s. 3d. per lb. for 1-ton lots.

CORTISONE. — One-kilo lots, ACETATE, 4s. 6d.; HYDROCORTISONE ACETATE or ALCOHOL, 4s. 9d. per gm.

CREOSOTE.—B.P.C., 1959, ex beechwood, 100 kilos, 15s. per kilo; 500 kilos, 14s. 6d.

CRESOL.—B.P. quality, 7s. 9d. per gall. in 5-gall. lots.

CYANOCOBALAMIN. — Under 25-gm. lots, 80s. per gm.; under 100-gm., 77s. 6d. per gm.; 100 gm., 75s. per gm.

EMETINE. — One-kilo lots HYDROCHLORIDE, 11,431s. per kilo.—BISMUTH IODIDE, 4,952s. per kilo.

EPHEDRINE.—ALKALOID nominally 6s. 6d. per oz. SULPHATE, 4s. 6d. and HYDROCHLORIDE, 3s. per oz.

FOLIC ACID. — B.P. and U.S.P., 1-kilo lots, £20 10s. per kilo.

GALLIC ACID.—B.P., 10s. 9d. per lb. for 1-cwt. lots; 5-cwt. 10s. 6d.

HYDROGEN PEROXIDE.—For 27.5 per cent. by weight, £115 per ton; 35 per cent., £138.

HYDROXOCOBALAMIN.—100 gm. and over, 150s. per gm.

INOSITOL.—One-kilo, 75s.; 10 kilos, 66s. per kilo.

IRON SALTS. — CHLORIDE, B.P.C., 1949, 3s. 1d. per kilo. GLUCONATE, B.P.C., 4s. 9d. per lb. in 1-cwt. lots; SULPHATE, B.P., crystals, 1-cwt. 70s. per cwt.; 5-cwt. 65s. per cwt.; granular, 2s. 6d. per cwt. extra.

PHOSPHATE, B.P.C., 7s. 2d. per kilo; OXIDE RED PRECIPITATED, B.P.C., 1949, 25 kilos, 6s. 3d. per kilo; CARBONATE, SACCHARATED, B.P.C., 1949, 28-lb., 3s. 3d.; 1-cwt., 3s.—AMMONIUM CITRATE, 250-kilos 8s. 6d. kilo.—QUININE CITRATE 2s. 4d. per oz. in 100-oz. tin.

ISOPRENALE SULPHATE. — One-kilo lots, 530s. per kilo; 5-kilos, 510s. per kilo.

MENAPHTHONE. — (One-kilo lots). B.P. 140s. per kilo; ACETOMENAPHTHONE, B.P., 140s.; WATER-SOLUBLE (menadione sodium bisulphite), 100s.

METHYL SALICYLATE. — Five-ton lots, 3s. 2d. per lb.; 1-ton, 3s. 2½d.; 10-cwt., 3s. 3d.; 5-cwt., 3s. 6d.; 1-cwt., 3s. 8d.

NEOMYCIN. — SULPHATE, B.P., 740s. per kilo; 5-kilos, 700s. per kilo.

NICOTINAMIDE. — (Per kilo). One-kilo, 38s.; 10 kilos, 36s.; 50 kilos, 34s. 6d.

NICOTINIC ACID. — One-kilo, 27s.; 50-kilos, 23s. per kilo.

NIKETHAMIDE.—50s. per kilo for 5-kilo lots.

OESTRADIOL. — MONOBENZOATE, 14s. 6d. per gm.

OXALIC ACID.—Manufacturers' rates for 1-ton lots, £132 per ton.

PARACETAMOL. — One-ton lots, 10s. 2d. per lb.

PENICILLIN. — SODIUM, POTASSIUM, or PROCAINE, 6d. per mega unit.

PHENOLPHTHALEIN.—One-cwt. 9s. per lb.

PHOSPHORIC ACIDS. — B.P. (s.g. 1.750) drums, 1s. 4d. per lb.; bottles from 4s. 7d.

PICROTOXIN.—Per oz. 45s. 6d. (4-oz.).

PILOCARPINE.—In 1-kilo lots prices are: HYDROCHLORIDE, 1,516s. per kilo; NITRATE, 1,357s.

PIPERAZINE. — Less than 50 kilos are: ADIPATE, 19s. 3d. per kilo; CITRATE, 18s. 6d.; HEXAHYDRATE, 13s. 3d.; PHOSPHATE, 20s. 6d.; TARTRATE, 19s. 6d.

PROGESTERONE.—Price is 1s. 3d. per gm. for 1-kilo lots.

PYRIDOXINE. — One-kilo, £31 10s. per kilo; 10 kilos, £31 5s.

PYROGALLIC ACID. — One-cwt. pure crystals, 24s. 6d. per lb.; resublimed 26s. 6d.

RESORCINOL.—One-cwt. lots, 12s. 4d. lb.

RIBOFLAVINE. — One kilo, 217s. 6d. and 10-kilos, 212s. 6d. per kilo.

SACCHARIN.—B.P. powder 1 lb. and over 15s. 6d. per lb. SODIUM salt, B.P., 14s.

SALICYLAMIDE. — One-cwt., 6s. 3d. per lb., 5-cwt., 5s. 11d.

SALICYLIC ACID.—One-cwt., 3s. 4½d. per lb.; 5-cwt., 3s. 2d. per lb.

SALOL.—B.P.C., 9s. per lb. (1-cwt. lots).

SAL PRUNELLA. — Balls, 3s. 9d. per lb. in 1-cwt. lots.

SANTONIN.—5-cwt. lots, 320s. per kilo.

STREPTOMYCIN.—BASE or SULPHATE, 9d. per gm. Same price for DIHYDRO.

THYMOL.—One-cwt. lots are 11s. 3d. per lb.

VITAMIN A. — Synthetic. Supplied in concentrate 1 million international units per gm. as acetate at £17 14s. 2d. per kilo and oil-soluble palmitate at £15 12s. 6d. for one-kilo lots.

VITAMIN D. — D₂ powder for tabletting 850,000 i.u. per gm., 125s. per kilo; in oil, 1 million i.u. per gm., 67s. 6d. per kilo for 100,000 m.i.u. Crystalline: see under calciferol. D₃ in oil (1 mega per gm.), threepence per mega for less than 1,000 megas. Crystalline, 12s. per gm. in 100-gm. ampoule.

VITAMIN E.—Natural d alpha tocopheryl acid succinate, hydrogen salt, 1,210 i.u.; 25 gm. lots, 9d. per gm.; 100 gm., 8d.; 1 kilo, £25. Synthetic dl, 1,000 units per gm. The prices are 8d., 5d. and £18 for the same quantities.

Crude Drugs

ACONITE. — Spot, Spanish *napellus*, 2s. 8d. per lb.; shipment, 2s. 6d., c.i.f.

AGAR. — *Kobé* No. 1, 12s. 6d. per lb. in bond; September–October shipment, 12s. 3d., c.i.f. Spanish, 15s., duty paid, to arrive.

ALOES. — Primes, 225s. per cwt. spot. Shipment, 250s., c.i.f. nominal. Curaçao, spot, 270s.

ARROWROOT. — St. Vincent from 1s. 3d. to 1s. 6d., as to grade.

BAY—LEAVES. 1s. 9d. per lb., spot.

BELLADONNA.—HERB. 3s. per lb., spot. **LEAVES.** 3s. 3d., c.i.f. **Root**, 1s. 8d. per lb., spot; shipment, 1s. 7d., c.i.f.

CASSIA. — *Fistula*, 105s. per cwt. landed; *ligneæ* (whole), for prompt shipment, 177s. 6d., c.i.f.; selected broken, 167s. 6d., c.i.f.

CINNAMON. — QUILLS, Ceylon (per lb., c.i.f.); 4 O's, 9s. 4d.; single O, 7s. 6d.; quillings, 5s. **BARK**, Seychelles, 90s. cwt. spot.

ERGOT. — Portuguese, 10s. per lb. spot; shipment, 9s. 6d., c.i.f. East European, 8s. 6d. and 8s., c.i.f.

GENTIAN. — Root, 190s. per cwt. spot; shipment, 175s. to 180s., c.i.f., as to origin.

GINGER. — (Per cwt.) African, spot, 320s. per cwt. Jamaican No. 3 spot, 625s.; August–September, 555s., c.i.f. Cochin for shipment, 370s., c.i.f.

GUM ACACIA. — Kordofan cleaned sorts, 170s. per cwt. spot; September–October shipment, 154s., c.i.f.

HENNA. — Indian, for shipment, 66s., c.i.f.

HONEY. — (Per cwt.) Australian light amber, 135s. to 140s., and medium amber, 110s. to 115s. (September–October delivery); Argentine, 127s. 6d. to 132s. 6d.; Canadian, 175s.; Mexican, 130s. to 140s., all ex warehouse.

IPECACUANHA. — Matto Grosso for shipment, 60s. per lb., c.i.f. and spot from 63s. to 65s., as to test. Colombian 66s., c.i.f.; spot, 67s. Costa Rican, 89s., c.i.f. and 94s. to 95s., spot, as to test.

KARAYA. — No. 1 f.a.q. gum, spot, 400s.; No. 2, 335s. per cwt.

KOLA NUTS. — African, 6d. spot and 5½d. per lb., c.i.f.

LANOLIN. — ANHYDROUS B.P. is from 1s. 10d. to 2s. 1d. per lb. in 1-ton lots delivered free drums.

LEMON PEEL. — Spot, 2s. 3d. per lb.; partially extracted, 1s. 6d.

LINSEED. — Whole, 72s. 6d. per cwt.; crushed, 110s.

LIQUORICE. — Natural root: Russian 65s. per cwt.; Anatolian, 60s.; Anatolian decorticated, 170s. Block juice; Anatolian, 210s. to 220s. per cwt.; Italian stick from 395s. to 460s. per cwt.

LOBELIA. — Herb, Dutch on the spot, 4s. 6d. to 5s. 3d. per lb.; new crop, 4s. 6d., c.i.f.

MACE. — Whole pale blade, 14s. 6d. per lb. on the spot. Shipment, 14s., f.o.b.

MENTHOL. — Chinese; spot, 26s. 6d. per lb., duty paid; shipment, 25s., c.i.f.; Brazilian, 20s. 6d., in bond and shipment, 20s. 6d., c.i.f.

MERCURY. — Spot, ex warehouse £100 per flask of 76 lb.

NUTMEGS. — West Indian, spot, 80's, 9s. per lb.; unassorted, 7s. 9d.; defectives, 5s. 3d. East Indian for shipment: 80's, 7s. 5d. per lb.; 110's, 7s.; b.w.p., 4s. 5d., all c.i.f.

NUX VOMICA. — Cochin, 75s. per cwt. on the spot; shipment, 47s. 6d., c.i.f.

ORANGE PEEL. — Spot; Sweet ribbon, 1s. 8s. per lb., bitter quarters: West Indian, 10½d.; Spanish, 1s. 9d.

PEPPER. — White Sarawak spot is 2s. 8½d. to 2s. 10½d. per lb.; shipment, 2s. 8d., c.i.f. Black Sarawak spot, 2s. 4½d., shipment, 2s. 2½d., c.i.f. Black Malabar is 340s. per cwt., spot nominal; shipment, 317s. 6d., c.i.f.

PIMENTO. — Spot quoted at 690s. per cwt.; shipment, 600s., f.o.b.

PODOPHYLLUM. — Spot per cwt.; *Emodi*, 220s. (205s., c.i.f.); *Peltatum*, 200s.

PYRETHRUM. — Extracts — partially dewaxed, 25 per cent. pyrethrins, 69s. to 65s. 6d. per lb.; pale, 82s. 6d. to 79s.; crude oleoresin, 60s. 6d.

QUASSIA. — Supplies virtually unobtainable.

QUILLAIA. — Spot, 110s. per cwt.; shipment, 100s., c.i.f.

RHUBARB. — Good manufacturing, offered at 8s. 6d. per lb.

SAFFRON. — Mancha superior, 275s. to 280s. per lb., spot.

SARSAPARILLA. — Jamaican native red spot, 3s. per lb.; shipment, 2s. 9d., c.i.f. nominal.

SASSAFRAS. — Brazilian is from 2s. 4d. per lb.

SEEDS. — (Per cwt.) **ANISE.** — Spanish, 275s., duty paid. **CARAWAY.** — Dutch, 125s., duty free. **CELERY.** — Indian, little easier on spot at 160s.; shipment slightly firmer at 155s., c.i.f. **CORIANDER.** — Spot Moroccan unchanged at 62s. 6d., duty paid; shipment, 50s., c.i.f. **CUMIN.** — Moroccan, 245s., duty paid; shipment, 210s., c.i.f. **DILL.** — Indian, 90s., spot; shipment, 77s. 6s., c.i.f. **FENNEL.** — Indian nominally 165s., spot; shipment, 158s., c.i.f. **FENUGREEK.** — Moroccan, 48s. 6d., duty paid; shipment, 33s., c.i.f. **MUSTARD.** — English, 42s. to 65s. according to quality.

SENEGA. — Old crop, 19s. per lb. on the spot. New-crop for shipment, 17s. 6d., c.i.f.

SENNA. — (Per lb.) Tinnevelly LEAVES spot: Prime No. 1, 2s. 3d.; prime No. 2, 1s. 9d.; No. 3, f.a.q. spot, 1s. 3½d. Shipment; No. 3, 1s. 1d., c.i.f. PODS: Tinnevelly, hand-picked, 2s. 6d. to 2s. 9d.; manufacturing 1s. 9d. spot; shipment, 1s. 6d., c.i.f. Alexandria PODS: hand-picked in limited supplies at 7s. and 4s. 6d.; manufacturing, small lots at from 3s. 3d. to 3s. 6d.

SHELLAC. — F.O.T.N., 200s. per cwt., No. 1, 215s.; F.O., from 225s.

SLIPPERY ELM BARK. — Spot offered at 3s. 4d. per lb.

SQUILL. — Italian new crop, 180s. per cwt., spot. Indian, 75s. per cwt., spot.

STRAMONIUM. — Continental LEAVES 85s. per cwt. spot.

STYRAX. — Spot, 16s. 3d. per lb.; shipment, 14s. 9d., c.i.f.

TONQUIN BEANS. — Para, spot, 4s. 9d. per lb.; shipment, 4s., c.i.f.; Trinidad, 5s. 6d., spot.

TRAGACANTH. — No. 1 ribbon, £230 per cwt., nominal. No. 2, £215, nominal.

TURMERIC. — Madras finger offered at 150s. per cwt., spot; shipment, 150s., c.i.f.

VALERIAN ROOT. — Spot: East European, 175s. per cwt.; Indian, 175s. Shipment: Continental, 172s. 6d. to 214s., c.i.f.

VANILLIN. — Rates (per lb.) are now:— 5-cwt. lots, 21s. 6d.; 1-cwt., 21s. 9d.; 56-lb., 22s.; small quantities, 22s. 6d.

WAXES. — (Per cwt.): **BEES'.** — Dar-es-Salaam, spot, 455s.; shipment, 435s., c.i.f. Sudanese, spot, 400s., in bond; shipment, 395s., c.i.f. **CANDELILLA.** — Spot, 465s.; forward, 460s. landed. **CARNAUBA.** fatty grey spot, 370s.; shipment, 365s., c.i.f., prime yellow, spot, 760s.; shipment, 710s., c.i.f.

WITCH HAZEL LEAVES. — Spot quotations are 2s. 2d. per lb.; new crop for shipment, 2s. 1d., c.i.f.

Essential and Expressed Oils

ALMOND. — Imported sweet oil is 7s. 3d. per lb., spot.

BAY. — West Indian about 25s. per lb. on the spot.

BERGAMOT. — Spot quotations for 38 per cent. oil are about 99s. per lb.

BIRCH TAR. — Rectified, 3s. per lb.

BOIS DE ROSE. — Brazilian, 17s. 6d. per lb. on the spot; shipment, 16s., c.i.f.

BUCHU. — Spot, 250s. to 360s. per lb. as to quality.

CAJUPUT. — Spot, from 10s. per lb.

CANANGA. — Spot offers are from 30s. per lb.

CARDAMOM. — Indian from 225s. per lb., spot.

CELERY SEED. — Quotations are from 116s. per lb.

CLOVE. — Madagascar leaf spot, 7s. 4½d. per lb., duty paid; shipment, 6s. 1½d., c.i.f. Rectified, 10s. Distilled bud-oil, ENGLISH B.P., 26s. per lb. for 1-cwt. lots.

CUBEBS. — Spot supplies of imported are 86s. per lb.

LAVANDIN. — From 22s. 6d. to 27s. per lb. as to quality.

LEMON. — Sicilian from 17s. to 30s.

LEMONGRASS. — Spot, 8s. 4½d. per lb.; shipment, 8s. 1½d., c.i.f.

LIME. — West Indian distilled, 58s. per lb. on the spot.

NUTMEG. — East Indian B.P. oil is about 40s. per lb. English distilled, 65s.

ORANGE. — Floridan sweet oil, 5s. to 6s. per lb. West Indian, 10s.; Spanish, 16s. 6d. to 18s.

PALMAROSA. — Shipment, 52s. 6d. per lb. c.i.f.; spot, 60s.

PATCHOULI. — Penang is 27s. 6d. duty paid and 26s., c.i.f., per lb.

PENNYROYAL. — Spot, 15s. per lb. duty paid.

PEPPERMINT. — *Arvensis*: Chinese spot, 8s., shipment, 7s. 10½d., c.i.f. Brazilian spot and shipment, 7s. 6d., c.i.f. *Piperita*: Italian, 48s. to 60s., spot; American from 31s. per lb. as to make.

PETITGRAIN. — Paraguay, 15s. 3d. per lb. spot; shipment, 14s. 9d., c.i.f.

PIMENTO. — English-distilled berry from 200s. per lb. and imported, 32s. 6d. Rectified leaf, 22s. per lb.

PINE. — *Pumilosis*, 30s. per lb., *sylvestris*, 9s.; *abietis*, 15s.

ROSEMARY. — Spanish, 13s. 6d. per lb., duty paid.

SAGE. — Spanish, 16s. 6d. per lb., Dalmatian, 18s. 6d.

SANDALWOOD. — Mysore, 106s. 6d. per lb., spot. East Indian for shipment, 106s., c.i.f.

SPERMINT. — American oil on the spot, 26s. per lb.

TANGERINE. — Sicilian best quality about 37s. per lb.

THYME. — From 20s. to 22s. 6d. per lb. as to test.

VETIVERT. — Bourbon spot, 85s. to 97s. 6d. per lb.

YLANG YLANG. — Best oil quoted about 135s. per lb.

UNITED STATES REPORT

NEW YORK, AUGUST 25: Buying of Brazilian MENTHOL continues in a hand-to-mouth manner. A short supply situation keeps the price for BRUCINE steady with trading reported at a standstill. RHUBARB declined 10 cents to 40 cents a lb. for the whole root from India. BERGAMOT OIL firmed up 25 cents to as high as \$16 a lb. in the absence of offers from Italy.

PRINT AND PUBLICITY

On Offer With Shampoo

JOHNSON & Johnson (Great Britain), Ltd., Slough, Bucks, are offering for 24s. (value 50s.) to each purchaser of their baby shampoo the fluffy bunny nightdress case illustrated in the advertisement here reproduced. It is appearing in the September issue of *Mother*; October issue of *Parents* and September 19 issue of *Woman's Own*.



OFFERED TO CUSTOMERS — AND CHEMISTS: Southalls (Sales), Ltd., Bessemer Road, Welwyn Garden City, Herts, have produced a 16-p. booklet in colour on skin care to promote Nivea preparations. Members of the public buy it at 1s. 6d. per copy, but any chemist may obtain a copy free.



Fluffy Bunny Nightdress Case for 24/- Value 50/- when you buy JOHNSON'S Baby Shampoo



Booklet for Mothers Reissued

A NEW edition of the "Cradle Days" booklet of Trufood, Ltd., becomes available early in September. Devoted mainly to bottle feeding the booklet also contains sections on Humanised

Trufood, Nursery Hysan, Trufood half-cream and the company's foods for weaning (all "chemists only"). Chemists who wish to have copies for free distribution to customers should apply to the company at 113 Newington Causeway, London, S.E.1.

PRESS ADVERTISING

J. & E. ATKINSON, Ltd., 17 Bessemer Road, Welwyn Garden City, Herts: Atkinson Skin Deep skin care range. In *Woman's Own*, *Vogue*, *Vanity Fair* and *Honey* during the autumn.

BOEHRINGER INGELHEIM, Ltd., Isleworth, Middlesex: Halaspray. Commercial television advertising starts on September 15 but there is no national Press advertising at present (corrected note).

BURROUGHS WELLCOME & Co., 183 Euston Road, London, N.W.1: Saxon. In newspapers and magazines.

CUSSENS SONS & Co., Ltd., Kersal Vale, Manchester: Rhapsody gift sets. In *Woman*, *Woman's Realm*, *Woman's Own Christmas Annual*, *Woman's Weekly*, *She*, *Vogue*, *The People's Friend*, *Woman and Home* and *T.V. Times Christmas Extra*.

DREAMLAND ELECTRICAL APPLIANCES, Ltd., 30 High Street, Southampton, Hants: Dreamland electric blankets. In *Daily Mirror*, *Daily Express*, *Daily Mail*, *Daily Telegraph*, *Sunday Express*, major Scottish and Irish newspapers and the provincial Press.

COMMERCIAL TELEVISION

Figures in these columns represent the number of appearances of the "spot" during the week.

September 6—12

	London	Midland	North	Scotland	Wales	South	North-east	Anglia	Ulster	Westward	Border	Grampian	Eireann	Channel Is.	W. & N. Wales
1001 cleaner	—	—	—	3	—	—	—	2	—	—	—
4711	2	2	2	2	2	2	—	—	—	—	—
Alka-Seltzer	4	4	4	4	4	3	4	4	4	4	4
Anadin	3	8	3	7	8	4	3	3	2	4	1
Andrew's liver salt	3	2	4	3	2	2	3	3	4	3	2
Askin powders and tablets	—	—	—	—	14	—	—	—	—	—	5	3	—
Beecham's powders	4	4	4	3	5	4	4	4	4	2	2	4	2
Bellair hair spray	—	4	4	5	4	—	4	6	—	—	—	—	—
Codella cream	—	—	—	—	—	—	—	—	11	8	6	—	—
Cuticura preparations	2	2	2	2	2	—	2	—	3	—	—	1	—
Delrosa rose hip syrup	...	1	1	3	—	—	1	—	—	—	—	—	—	—	—
Dentucreme	1	2	1	2	1	—	1	1	2	1	2	2	1
Dinneford's magnesia	2	—	1	—	1	—	1	—	—	—	—	—	—
Eno Fruit Salt	3	3	3	3	3	—	3	3	—	—	—	—	—
Eucryl smokers' tooth-powder	...	2	—	2	2	—	2	—	—	—	—	—	—	—	—
Field's Lady Manhattan	...	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Germolene	3	3	3	2	3	2	3	4	4	3	—	4	—
Gillette razor blades	3	3	3	3	3	3	3	3	3	3	3	3	3
Glovelies	—	1	—	—	—	—	—	—	—	—	—	—	—
Imperial Leather	...	—	—	—	—	—	—	3	—	—	2	—	—	—	—
Loxene shampoo	...	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Milk of Magnesia	...	—	—	—	—	—	—	—	1	—	1	—	—	—	—
tablets	3	2	2	2	—	3	2	3	2	—	2	2	3
Moorlands indigestion tablets	...	—	—	4	—	—	—	—	—	—	—	—	—	—	—
Phyllosan	3	3	2	—	4	10	3	1	—	—	—	—	—
Rennies	3	3	3	3	2	3	3	—	3	4	3	—	6
Rinstead pastilles	3	2	2	2	—	3	3	4	2	4	2	4	1
Setters	2	2	3	—	1	2	2	2	2	—	—	—	2
Wright's coal tar soap	2	—	—	1	1	1	—	—	—	—	—	—	1

LAOY ESQUIRE, 86 Brook Street, London, W.1: Instant shoe colouring. In *Woman* and *Woman's Realm*.

LANCOME (ENGLAND), Ltd., 14 Grosvenor Street, London, W.1: "Magie for Christmas" campaign and the company's range of coffrets. In national magazines commencing in September.

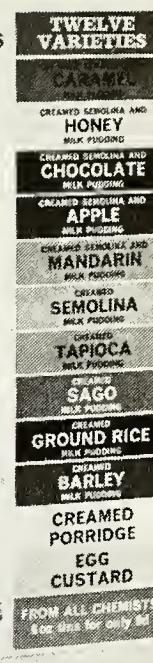
**The perfect foods
for the
growing child**
Cow & Gate
Dairy Junior Foods



Give your child the
very best

9d.

COW & GATE MILK FOOD
For FOOD OF ROYAL BABIES



SHOWCARD IN TWO FORMS: Display material available on application to Cow & Gate, Ltd., Guildford, Surrey, includes two variants of a 10 x 8 in. showcard as illustrated. One is cut out to accommodate a tin. Both are in full colour.

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Thursday, September 3

NOTTINGHAM BRANCH, PHARMACEUTICAL SOCIETY. Visit to Coventry. Coach leaves corner of Friar Lane and Maid Marian Way, Nottingham, at 2.15 p.m. Contact Mrs. S. T. Dickinson at Sandiacre 3100 (daytime) or 2695 (evening) for seats.

Friday, September 4

ROYAL PHOTOGRAPHIC SOCIETY, Art gallery, Guildhall, London, E.C.2. International Exhibition of Photography. Until September 17.

Sunday, September 6

AUTUMN FAIR, Leipzig, East Germany. Until September 13.

BRITISH VETERINARY ASSOCIATION, Grand Hotel, Bristol. Congress and annual meeting. Until September 12.

ROMFORD BRANCH, PHARMACEUTICAL SOCIETY, Navestock Heath, at 2.15 p.m. Mystery car tour. Intending participants should advise Mr. J. D. Mackenzie, 77 Bridge Avenue, Upminster, by September 2.

Advance Information

EDINBURGH AND EAST OF SCOTLAND BRANCH, GUILD OF PUBLIC PHARMACISTS, Royal Infirmary, Edinburgh, 3. September 15. Social evening for hospital pharmacists attending the British Pharmaceutical Conference. Those wishing to attend should notify Miss M. Latto, chief pharmacist, Eastern General Hospital, Edinburgh, 6, immediately.

LONDON NURSING EXHIBITION, Seymour Hall, London, W.1, October 12-16.

PHARMACEUTICAL GROUP, ROYAL SOCIETY OF HEALTH, 90 Buckingham Palace Road, London, S.W.1. September 24. Annual meeting.

WORLD AEROSOL FAIR, Frankfurt-on-Main, Western Germany, October 12-18.

PATENTS

COMPLETE SPECIFICATIONS ACCEPTED
From the "Official Journal (Patents)," August 6

- Phosphoric acid esters and process for their manufacture.* Sandoz Patents, Ltd. 969,829.
Quinone-phosphoric acid addition compounds. E. du Pont de Nemours & Co. 969,849.
Acid-addition salts of dialkylaminoalkylguanidines. Imperial Chemical Industries, Ltd. 969,851.
Silicon-containing substances. Monsanto Chemicals, Ltd. 969,856.
Cabinets for displaying and dispensing merchandise in packet form. Artistic Woodwork, Ltd. 969,871.
11 β -and 14 α -hydroxylated 16 α -methyl steroids and process for their manufacture. Schering, A.G. 969,904.
Veterinary compositions comprising a nitroimidazole derivative. Merck & Co., Inc. 969,908.
Process for the manufacture of photographic colour images. Gevaert Photo-Producten, N.V. 969,921.
Tertiaryamino buynyl alcohols. Lakeside Laboratories, Inc. 969,922.
Treatment of growth media. Hooker Chemical Corporation. 969,932.
Process for the production of purified enzyme preparations. Farbenfabriken Bayer, A.G. 969,936.
Fungicidal compositions. Rohm & Haas Co. 969,962.
Liquid detergent composition. Unilever, Ltd. 969,966.
Substituted 1,3-diphenylpropyl amines and imines. F. Hoffmann-La Roche & Co., A.G. 969,977.
Synthetic organic chemical preservatives for beer. F. & M. Schaffer Brewing Co. 969,979.
Production of positive photographic records. Ilford, Ltd. 969,996.
Derivatives of nitrofuran. Norwich Pharmacal Co. 969,999.
Aerosol compositions. Revlon, Inc. 970,027.
Dispenser for dispensing adhesive tape. Kodak, Ltd. 970,036.
Liquid-tight carton or like container. Jagenberg-Werke, A.G. 970,066.
Package irradiation plant. United Kingdom Atomic Energy Authority. 970,074.
Organic phosphorothioate derivatives. American Cyanamid Co. 970,121.
Incontinence pads and other pads for like purposes. Southalls (Birmingham), Ltd. 970,123.
Piperazine derivatives. Soc. Industrielle pour la Fabrication des Antibiotiques. 970,130.
Slide projectors. Zeiss Ikon, A.G. 970,163.
Process for producing L-methionine. Sumitomo Chemical Co., Ltd. 970,203.
Medical treating table equipment. Kifa, A.B. 970,281.
Dry shavers. Remington Electric Shaver, Ltd. 970,312-14.

British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from September 16.

From the "Official Journal (Patents)," August 12

Milk coagulating enzyme. Meito Sangyo, K.K. 970,331.
Process for preparing globulin and the globulin when prepared. O. Laurcnt. 970,345.
Vitamin preparations and process for producing them. Lovens Kemiske Fabrik ved a. Kongsted. 970,363.
Treatment of tumours. Farbwerke Hoechst, A.G. 970,365.
Process for treating solutions and apparatus for use therein. Dow Chemical Co. 970,400.
N-substituted-N'-hydroxymethyl-ureas. Geistlich, Söhne, A.G. für Chemische Industrie, Ed. 970,414.
Herbicidal products. Dow Chemical Co. 970,437.
Pyridopyrimidinone compounds. Cutter Laboratories, Inc. 970,439.
Anti-inflammatory compositions comprising steroids and indole derivatives. Merck & Co., Inc. 970,440.
Thiophene derivatives. Deutsche Gold-und Silber-Scheideanstalt. 970,445.
Steroid lactones, hydroxy acids and alkali metal salts thereof. G. D. Searle & Co. 970,446.
Aluminium phosphate and its production. W. R. Grace & Co. 970,460.

Free-flowing acid compositions. Monsanto Co. 970,462.

- Processes for chemical treatment and preparations for use therein.* Philco Corporation. 970,474.
Salt of 1,2-sulphonic-sulphinic acids and method for their preparation. California Research Corporation. 970,476.
1:2:4-Triazoles and processes for the preparation thereof. Haco, A.G. 970,480.
Bromination of steroid compounds. Roussel-Uclaf. 970,481.
17-Desoxy corticosteroids and processes for their preparation. Roussel-Uclaf. 970,482-84.
Steroids and processes for their preparation. Roussel-Uclaf. 970,485-88.
Tetrahydro-isoquinoline derivatives and a process for the manufacture thereof. F. Hoffmann-La Roche & Co., A.G. 970,573.
Quaternary ammonium compounds and methods for the preparation thereof. Aspro-Nicholas, Ltd. 970,577.
Quinoline derivatives and process for the preparation thereof. Aspro-Nicholas, Ltd. 970,578.
Pesticidal compositions. E. I. du Pont de Nemours & Co. 970,579.
Insecticidal thiophosphoric acid esters and their manufacture. CIBA, Ltd. 970,581.
2,4-dianiinopyrido [2,3-d] pyrimidines. Wellcome Foundation, Ltd. 970,583.
Therapeutic compositions containing N-substituted 4-arylalkyl-piperidines. Neisler Laboratories, Inc. 970,597.
Extruded medico-surgical tubes having a tapered section. D. S. Sheridan. 970,645.
Medico-surgical tubes having integral connectors in their ends. D. S. Sheridan. 970,647.
Veterinary compositions comprising halogenated nitro-benzamides. Dr. Salsbury's Laboratories. 970,650.
Nematode control. Exploitatiemaatschappij Elkabe, N.V. 970,652.
Method of removing arsenical compounds contained in sulphur. Vetrocoke, S.p.A. 970,665.
Phosphorus-containing esters. Farbenfabriken Bayer, A.G. 970,670.
Electric shaver. Sperry Rand Corporation. 970,681.
Preparation of phenol from benzoic acid. Stamicarbon, N.V. 970,683.
Suture and holder. Ethicon, Inc. 970,685.
Organic phosphate pesticide. Allied Chemical Corporation. 970,686.
Solvent compositions. Dow Chemical Co. 970,690.
Cattle dips. Dow Chemical Co. 970,692.
Production of sodium sulphate or potassium sulphate. Scottish Agricultural Industries, Ltd. 970,744.
Preparation of fluorochlorobenzenes. Imperial Chemical Industries, Ltd. 970,746.
Separation-resistant capsule. Eli Lilly & Co. 970,761.
Phosphorus-containing polyols. Albright & Wilson (Mfg.), Ltd. 970,815.
Process for the manufacture of phenols. Mitsubishi Petrochemical Co., Ltd. 970,835.
Means for testing the action of chemical compounds on micro-organisms. Mast Laboratories, Ltd., J. Stainton, A. J. Oliver and A. E. Brookfield. 970,877.
Washing, cleaning, wetting and foaming agents. Henkel & Cie, G.m.b.H. 970,883.
Inflatable splint. E. D. V. Nicoll. 970,890.
Analgesic preparation. Youngs Rubber Corporation. 980,894.
Derivatives of 6 α -Methyl-17 α -hydroxyprogesterone and method of preparing them. Ortho Pharmaceutical Corporation. 970,898.
Process for the preparation of thiophosphate esters. American Cyanamid Co. 970,910.
Arylation process. Monsanto Chemicals, Ltd. 970,911.
Method of treating plants to combat fungi. Montecatini Soc. Generale per l'Industria Mineraria e Chimica. 970,922.
Substituted p-aminopentoxyalkynes. Wellcome Foundation, Ltd. 970,935.
Electrophotographic material. Gevaert Photo-Producten, N.V. 970,937.
Quinoline derivatives and process for the preparation thereof. Aspro-Nicholas, Ltd. 970,941.

British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from September 23.

TRADE MARKS

APPLICATIONS ADVERTISED BEFORE REGISTRATION

From the "Trade Marks Journal," August 12
For preparations for killing plants, weeds, grass and brush, preparations for destroying vermin, pesticides, insecticides, parasiticides, fungicides, bactericides, algacides, miticides, larvicides, nematocides, rodenticides, preparations for sterilising the soil, fumigating preparations (not being perfumes), defoliants and sanitary substances (5)

VIDDEN, 856,354, by Dow Chemical Co., Midland, Michigan, U.S.A.

For pharmaceutical preparations and substances (5)

BAYAPEN-V, 857,489, by Sterling-Winthrop Group, Ltd., Surbiton, Surrey. BIO-FLORA, 858,589 by Healthcrafts Ltd., Worcester Park, Surrey.

For pharmaceutical preparations consisting of or containing certain sulphuranes (5)

SULFOXAN, 857,823, by Evans Medical, Ltd., Liverpool, 24.

For all goods (5)

LAROVAL, 858,815, by Roche Products, Ltd., Welwyn Garden City, Herts. DISLEM, 863,186, by Hax, Ltd., London, W.C.1.

For pharmaceutical preparations in tablet form for human use in the treatment of pluriglandular disorders (5)

DYNOTABS, 859,534, by W. Talvan Rees, Ltd., Cheltenham.

For hypnotics (5)

CLORANOX, 859,570, by Marshall's Pharmaceuticals, Ltd., London, W.C.2.

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SERENADE, TRANQUIL, 864,077-78, by Gordon B. Moore (Electrical), Ltd., Nottingham.

CONTEMPORARY THEMES

Subjects of contributions in current medical and technical periodicals

ORAL L-PENICILLANINE. Growth-retarding effect of, on sarcoma-180. *Nature*, August 15.

PYRETHRUM SPRAYS. Researches on the formulation of, for crop protection. *Pyrethrum Post*, April 1964.

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INTERFERON in human serum during clinical viral infections. *Lancet*, August 22.

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POST-OPERATIVE PAIN: Relief of, comparison of a 25 per cent, nitrous-oxide and oxygen mixture with morphine. *Brit. med. J.*, August 22.

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SORBITOL SOLUTION USP and nonionic surfactants in dispersed systems. *J. Amer. Pharm. Ass.*, August.

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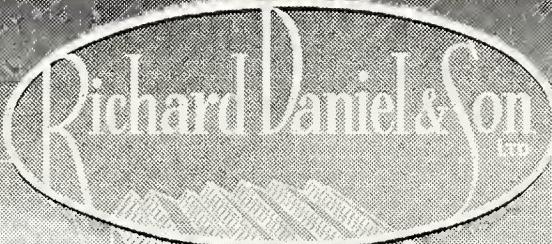
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PHARMACY DATA AUTOMATION. A method of. *Amer. J. hosp. Pharm.*, July.

NEOMYCIN, BACITRACIN, HYDROCORTISONE AND METHYLCELLULOSE SUSPENSION. Application of on extensive burn areas. *Amer. J. hosp. Pharm.*, July.

NEOMYCIN in antiperspirant compositions. *Schimmel Briefs*, July.



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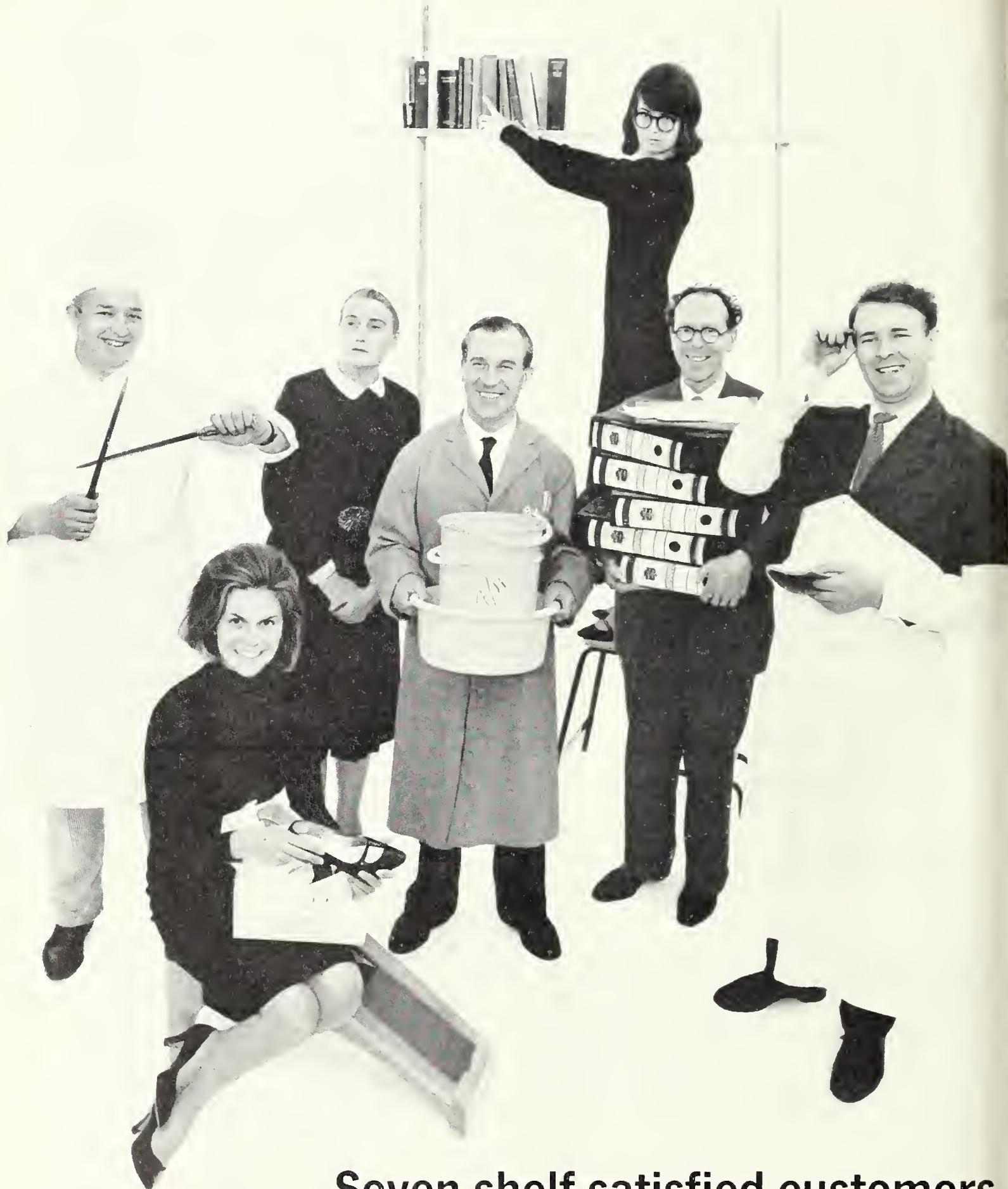
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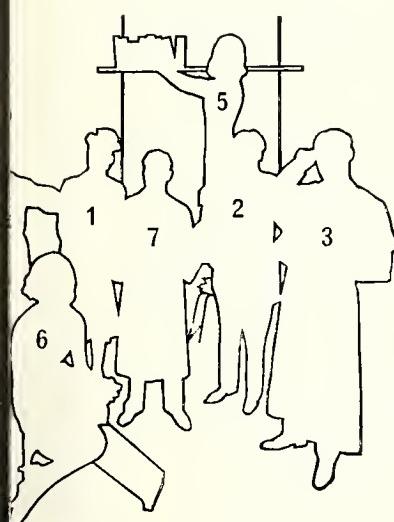
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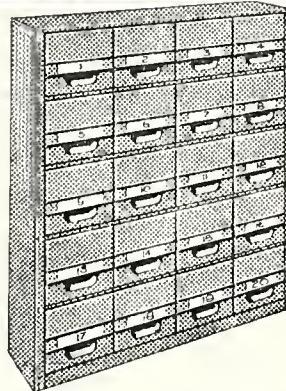
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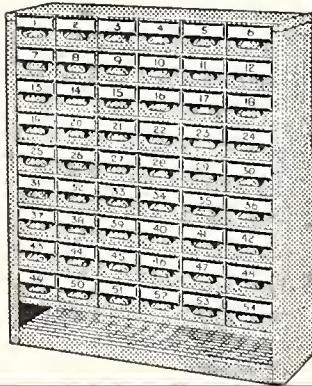


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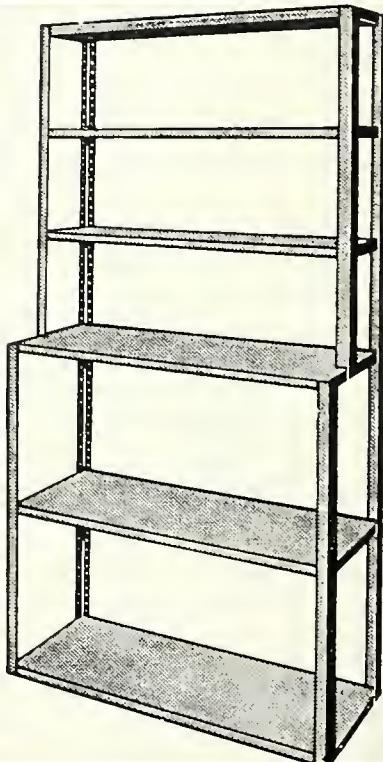
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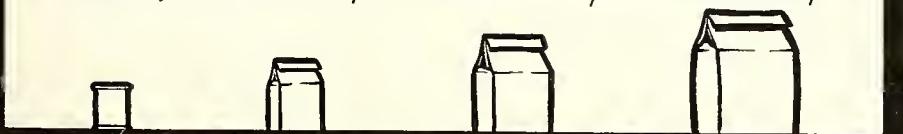
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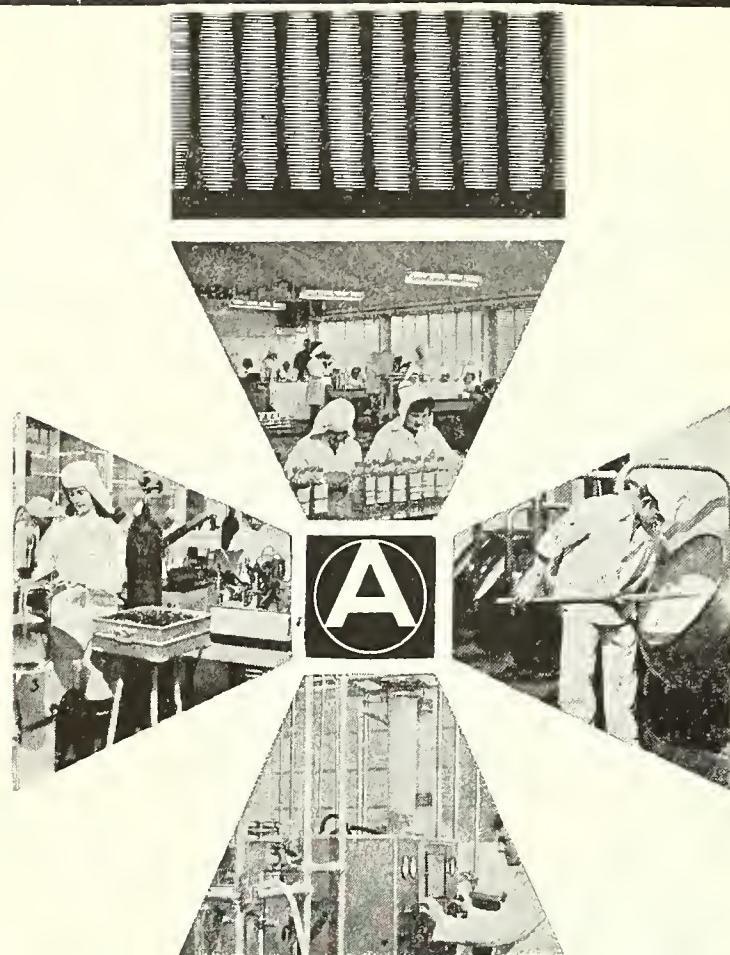
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MIDLANDS AREA: Drug Stores wanted: E. T. Perks, 16 New Street, Dudley, Worcs. Dudley 52368. C 6304

APPOINTMENTS**CANTERBURY GROUP HOSPITAL MANAGEMENT COMMITTEE****Deputy Chief Pharmacist**

Applications are invited for the appointment of Deputy Chief Pharmacist to the Group Pharmaceutical Department (Category IV Hospitals). The Department, which is situated at the Kent and Canterbury Hospital, serves the 12 hospitals and clinics in the area. Salary scale £898 to £1,223 per annum. Applications with full details and names of two referees to be sent as soon as possible to the Group Secretary, Central Office, Nunnery Fields Hospital, Canterbury. C 9398

**CHARING CROSS GROUP OF HOSPITALS
FULHAM HOSPITAL, LONDON, W.6****Senior Pharmacist**

required at the above teaching hospital (Category III—415 beds). Salary scale £851 rising by annual increments to £1,113 p.a. plus Higher Qualification Allowance, and London Weighting. The Department has a staff of eight and is responsible for the dispensing of the main hospital and a small maternity unit nearby. Successful candidate will deputise for Chief Pharmacist in his absence. Holiday arrangements honoured.

Pharmacist

(part-time) required for one or more sessions per week, 42s. 7d. per session. This is a new post created because of the development of the Sterile Ward and Kidney Dialysis Unit. Applications (for either post), giving details of previous experience and naming two referees, to Secretary as soon as possible. C 9438

CENTRAL GROUP HOSPITAL**MANAGEMENT COMMITTEE****Locum Pharmacist**

required for holiday relief duties in Hospitals within the group. August 31st to October 3, 1964, and September 7-12, 1964. Salary £20 19s. Applications to the Chief Pharmacist, Metropolitan Hospital, Kingsland Road, E.8. CLI, 6862. C 663

CENTRAL MIDDLESEX HOSPITAL, PARK ROYAL, LONDON, N.W.10**Pharmacist and Locum Pharmacist**

required. Applications giving details of qualifications, experience and age to the Medical Director as soon as possible. C 9429

CLAYTON HOSPITAL, NORTHGATE, WAKEFIELD**Post-graduate Pharmaceutical Student**

There will be a vacancy in September for a Post-graduate Pharmaceutical Student who requires one year's practical training before registration.

The Department is situated in a busy general hospital and there is ample opportunity to obtain a sound knowledge of hospital pharmacy.

Payment will be at the rate of £509 per annum.

Application form from Group Secretary, Wakefield "A" Group H.M.C., 113 Northgate, Wakefield. C 9404

DULWICH HOSPITAL, EAST DULWICH GROVE, LONDON, S.E.22**Pharmacist and Dispensing Assistant**

required. Whitley Council terms and conditions. Apply to the Chief Pharmacist, Dulwich Hospital, East Dulwich Grove, London, S.E.22. C 9437

ENFIELD GROUP HOSPITAL MANAGEMENT COMMITTEE**Senior Pharmacist**

required for duties within the Group; also applications invited for

Part-time Senior Pharmacist

for duties at South Lodge Hospital, London, N.21. Enfield War Memorial Hospital or St. Michael's Hospital, Enfield. Whitley Council salary plus London Weighting. Applications naming two referees to the Group Secretary, Chase Farm Hospital, The Ridgeway, Enfield, Middlesex. C 9452

GATESHEAD AND DISTRICT HOSPITAL MANAGEMENT COMMITTEE**Pharmacist**

Applications are invited from suitably qualified and experienced persons for the above post. The successful applicant will be required to work within the Gateshead Group of hospitals.

Pharmaceutical Whitley Council "C" salary and conditions of service apply.

Applications stating age, previous experience, etc., should be sent together with the names and addresses of two referees to the undersigned.

H. Clark, Group Secretary, "The Lodge," Queen Elizabeth Hospital, Sheriff Hill, Gateshead, 9, Co. Durham. C 6302

HAMMERSMITH HOSPITAL AND POST-GRADUATE MEDICAL SCHOOL, DU CANE ROAD, LONDON, W.12**Senior Pharmacist**

required at above General Post-graduate Teaching Hospital (Category V) to take charge of new, modern and well-equipped sterile products laboratory. Post also offers wide range of experience, and opportunity to keep abreast of developments in general pharmacy. Enlargement and modernisation of Department nearing completion. Whitley salary scale £851—£1,113 per annum plus £45/£55 London Allowance. Applications should be addressed to Chief Pharmacist. C 9424

HAMMERSMITH HOSPITAL AND POST-GRADUATE MEDICAL SCHOOL, DU CANE ROAD, LONDON, W.12**Pharmacist**

required at above General Post-graduate Teaching Hospital (Category V). Post offers varied work and excellent experience. Previous experience not essential. Enlargement and modernisation of Department nearing completion. Whitley salary scale £761—£1,019 per annum plus London Allowance. Commencing salary within this scale according to age and experience. Applications, stating age, qualifications and experience, and naming two referees, to Chief Pharmacist. C 9425

HILL END HOSPITAL, ST. ALBANS, HERTS

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Locum Chief Pharmacist

required from 31st August to 19th September, 1964, inclusive. Salary £24 5s. per week. Accommodation may be available for single man, if required. Applications giving details of qualifications and experience and naming two referees to the Chief Pharmacist. C 681

**HOSPITAL MANAGEMENT COMMITTEE NO. 9
WAKEFIELD "A" GROUP****Senior Pharmacist**

required for busy sterilising and manufacturing department in a category IV group hospital. Modern equipment includes newly installed rapid-cooling fluids autoclave. Post offers excellent experience. Salary £851—£1,113. Whitley Council conditions. Application form from Group Secretary, 113 Northgate, Wakefield. C 9405

ILFORD AND DISTRICT HOSPITAL MANAGEMENT COMMITTEE, KING GEORGE HOSPITAL, EASTERN AVENUE, NEWBURY PARK, ILFORD, ESSEX**Dispensing Assistant**

Part-time — 23 hours per week. Whitley Council pay and conditions. Apply to Group Secretary. C 9450

LONDON JEWISH HOSPITAL, STEPNEY GREEN, E.1**Locum Pharmacist**

required at the above hospital. Modern department. Every third Saturday morning off. Previous hospital experience not essential. Salary £19 19s. per week. Applications to the Chief Pharmacist (Telephone STE, 1222, Ext. 219). C 9394

Appointments—Continued**LONDON JEWISH HOSPITAL,
STEPNEY GREEN, E.1****Senior Pharmacist**

required at the above hospital. Modern department giving good general experience. Every third Saturday morning off. Previous hospital experience not essential. Whitley Council conditions of service and salary. Applications in writing stating age, qualifications and experience, together with the names of two referees to the Chief Pharmacist. C 9393

**MAELOR GENERAL
HOSPITAL,
WREXHAM, DENBIGHSHIRE****Senior Pharmacist**

for an expanding Hospital. Salary scale—£851 per annum to £1,113 per annum, Commencing salary according to previous experience.

Applications to be sent to the Group Secretary, Maelor General Hospital, Croesnewydd Road, Wrexham, Denbighshire. C 9415

**MAELOR GENERAL
HOSPITAL,
WREXHAM, DENBIGHSHIRE****Post-graduate Pharmaceutical Student**

A vacancy exists for the above post at this hospital. Whitley Council salary and conditions.

Applications to be sent to the Group Secretary, Maelor General Hospital, Croesnewydd Road, Wrexham, Denbighshire, North Wales. C 9414

MOORFIELDS EYE HOSPITAL**Senior Pharmacist**

Applications are invited for the post of Senior Pharmacist at the above Post-graduate Teaching Hospital. Interesting post in modern, well-equipped department. Whitley Council salary scale £851—£1,113 per annum plus £45/55 London Weighting. Applications to the Chief Pharmacist, Moorfields Eye Hospital, City Road, London, E.C.1. C 9446

MOORFIELDS EYE HOSPITAL**Dispensing Assistant**

Applications are invited for the post of Dispensing Assistant, female. Training given for Apothecaries' Hall Certificate. Whitley Council salary scale and conditions of service. Applications to the Chief Pharmacist, Moorfields Eye Hospital, City Road, London, E.C.1. C 9419

**NEWMARKET
GENERAL HOSPITAL****Dispensing Assistant**

required in modern Group Pharmacy. Ideal working conditions, alternate long weekends. Applications giving age, experience and names of two referees to the Group Pharmacist. C 9444

**PADDINGTON GENERAL
HOSPITAL,
HARROW ROAD, W.9****Senior Pharmacist**

required at above hospital. Commencing salary according to previous experience. Applications together with the names and addresses of two referees to the Hospital Secretary. C 665

**ROYAL HOSPITAL,
RICHMOND, SURREY****Senior Pharmacist**

Applications are invited for the post of Senior Pharmacist at the Royal Hospital (Acute General), Richmond, Surrey. Whitley Council salary and conditions of service, plus London Weighting. Applications giving details of age, experience, qualifications and names of two referees to the Administrative Officer, immediately. C 9423

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Applications are invited from suitably qualified candidates for appointment as:

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in the School of Pharmacy.

Applicants for post no. 2 must hold a qualification in Chemical Engineering and will be required to teach to the standard of the Final Bachelor of Pharmacy Examination of the University of London and will be encouraged to undertake research work.

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Further particulars and forms of application, which can be obtained from the Registrar, Technical College, Sunderland, should be returned to the Director of Education, 15 John Street, Sunderland, co. Durham, by 14th September, 1964.

C 9441

**PADDINGTON GENERAL
HOSPITAL,
HARROW ROAD, W.9****Locum Pharmacist**

required for indefinite period. Apply immediately to the Hospital Secretary. C 666

ROYAL FREE HOSPITAL**Pharmacist**

Applications are invited for the post of Pharmacist at the above Hospital. Whitley Council salary scale with extra pay for evening clinics. Apply naming two referees to Group Chief Pharmacist, Royal Free Hospital, Gray's Inn Road, W.C.1. C 679

**SOUTH OCKENDON
HOSPITAL,
Nr. ROMFORD and GRAYS,
ESSEX****Dispensing Assistant**

Applications are invited from suitably qualified or experienced persons for the post of Dispensing Assistant at the above hospital. Salary according to age: 18 to 21 years £299 to £402 a year; at 22 years and over within the scale £453 x £21 (1) x £20 (1) to £597. Additional £50 per annum payable to holders of specified qualifications, with maximum point of £678. Applications to the Group Secretary, South Ockendon Group Hospital Management Committee, Leytonstone House Hospital, High Road, London, E.11, giving names and addresses of two referees within 10 days of appearance of this notice. C 9445

**ST. ALBANS CITY HOSPITAL,
NORMANDY ROAD,
ST. ALBANS, HERTS
(402 beds)****Senior Pharmacist or Pharmacist**

Applications are invited for the above post at this hospital within easy reach of Central London. Whitley Council salary and conditions of service. Detailed applications naming two referees to the Chief Pharmacist. C 652

**ST. AUGUSTINE'S HOSPITAL,
CHARTHAM DOWN,
NEAR CANTERBURY, KENT****Dispensing Assistant**

required. Whitley Council salary and conditions. Applications, with names and addresses of two referees, to be sent to the Group Secretary. C 6291

**ST. ALBANS CITY HOSPITAL,
NORMANDY ROAD,
ST. ALBANS, HERTS
(402 beds)****Locum Tenens Pharmacist**

required immediately. Part-time would be considered. Whitley Council salary and conditions of service. Detailed applications giving names of two referees to the Hospital Secretary. C 659

**ST. LAWRENCE HOSPITAL,
CHEPSTOW, MON.****Dispensing Assistant**

Applications are invited for the above post. Salary, if holding Apothecaries' Hall Certificate, £416 at 20, £452 at 21, and £503—£678 if aged 22 or over. For others the salary is £366 at 20, £403 at 21, and £453—£597 if aged 22 or over. Apply quoting two referees to Group Secretary, 64 Cardiff Road, Newport, Mon. C 9416

**THE ROYAL MARSDEN
HOSPITAL, FULHAM ROAD,
S.W.3**

A Post-Graduate Teaching Hospital
Senior Pharmacist
required October 1st, 1964, to work in a new, well-equipped department. Post offers a wide variety of duties, some in association with the Institute of Cancer Research. Salary £851—£1,113 per annum, according to previous experience, plus London Allowance and £25 a year for Higher Qualification allowance. Application with names of two referees to the Group Pharmacist. C 9436

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DISPENSING AND/OR COUNTER ASSISTANTS required for London, E.C.1 and N.1. Highest salary paid in exchange for experience and loyalty. Apply in writing to: The Managing Director, Kendale Chemists, 51 Exmouth Market, London, E.C.1. C 6254

LOCUM required for 1 week from August 31st, September 7th, or September 14th. Modern shop. Reliable staff. Apply: J. Rose (Chemists), Ltd., 10 The Circle, Davyhulme, Manchester. Tel.: URM, 2199. C 6295

PHARMACIST. If you are retired, have a car and want a congenial part-time job, write for an appointment to Mr. Marshall, of Marshall's Pharmaceuticals, Limited, 17-18 Henrietta Street, London, W.C.2. C 6298

PHARMACY BRANCH MANAGER required for pharmacy in small town, excellent Superannuation Scheme and employment conditions. Application by September 1, 1964, in writing, giving full information of education, training and experience should be addressed to, Pleasley & Pleasley Hill Co-operative Chemists, Ltd., Pleasley, Mansfield, Notts. C 6268

SURREY. Manager or manageress required for 1 year old pharmacy in pleasant town. Light dispensing, little bookwork but stimulating counter trade. Furnished/unfurnished flat. Normal hours, Rota 1 week in 6. 3 weeks' holiday. Profit participation. Ideal for newly qualified. Box C 6256.

WEST BIRMINGHAM area, 5 miles City Centre. Experienced and capable dispensing assistant required for private pharmacy in industrial area. Busy dispensing. Good wages and conditions. Holiday arrangements honoured. Part-time considered. Box C 6238.

OVERSEAS

PHARMACIST, lady or gentleman, genuinely interested in retail pharmacy. Passage paid out. Please apply with full details Air Mail to Ray Jackson, P.O. Box 183, Ndola, N. Rhodesia. C 6305

WHOLESALE

OPPORTUNITY

Opportunity for Pharmaceutical Chemist with comprehensive manufacturing experience as managing director, Johannesburg Branch of Australian International Company. Salary £2,500 plus annual bonus and medical benefits. Replies which will be regarded as confidential, should be addressed to the Chairman 541273, c/o National and Grindlays Bank, 13 St. James Squares, London, S.W.1, with full details of educational and business experience, hobbies, other skills, age and marital state, with copies of any references. All applications will be acknowledged immediately. C 9451

SITUATIONS WANTED

EXPERIENCED GENTLEMAN requires post of responsibility, London area. Wholesale and manufacturing house. Replies acknowledged. Interview. Box C 6289.

EXPERIENCED SALESMAN. Valuable connection with chemists, department stores, etc., in the North-west of England, offers services on full- or part-time basis to established company where reliable representation with strong selling effort at all levels is required. Too young to retire, too active to take things easy. Box C 6300.

EXPERIENCED WINDOW-DRESSER available for private engagements. Box C 6292.

AGENTS

AGENCIES—NORTHERN IRELAND. Well-established firm with two experienced travellers and excellent showroom and stockroom accommodation anxious to obtain remunerative lines selling to main chemists and stores. Box C 6288.

CAN I HELP YOU to maintain and increase sales of your products? Agent covering South Wales and West England. Box C 6296

AGENTS required by exclusive French Cosmetic House established in this country. Please write giving full information, in confidence, of products handled together with area worked. Box C 6293.

GENTLEMAN operating as free-lance agent requires one additional good line worthy of selling to pharmacy trade, South West England and South Wales. Box C 6297.

THE CHEMIST AND DRUGGIST

SITUATIONS VACANT WHOLESALE



ARMOUR PHARMACEUTICAL COMPANY LTD

wish to appoint a

SUTURE DEPARTMENT MANAGER

He will be responsible to the Manager of Production for the efficient operation of an expanding manufacturing department producing a wide range of Sutures.

The successful applicant will be suitably qualified, with experience in planning, production line organisation, staff control and the application of mechanical packaging methods. He will also need an inventive mind.

This is an interesting and challenging position with a progressive Company, offering an attractive salary with contributory pension and free life insurance schemes.

Applications, giving full details of age, qualifications and experience, should be sent to:

The Manager of Production,
ARMOUR PHARMACEUTICAL COMPANY, LTD.,
Hampden Park, Eastbourne, Sussex.

C 9435



CYANAMID OF GREAT BRITAIN LIMITED

MEDICAL REPRESENTATIVES

Lederle Laboratories offers to the medical profession a complete range of well respected and established modern pharmaceutical products, all of them in the ethical field. Only men of the highest calibre are employed in our sales force, which is now being expanded. They receive comprehensive training and education in pharmaceuticals throughout their career at every level. The substantial research programme of the Company is mainly concerned with the quest for new medicines. This, together with continuous demand for Lederle's existing products, means that the fullest opportunities are available for representatives' personal advancement and progress.

If you are genuinely interested in a worthwhile career of service to the medical profession, and possess the personal qualities which such a position demands, please write to us. Applicants should be aged 25-35, and ideally have previous experience as a medical representative, or a medical/pharmaceutical background.

Successful candidates will be offered:—

1. Good salaries: revised recently.
2. Personal Incentive Scheme.
3. Three weeks' annual holiday.
4. Company car.
5. Pension/Life Assurance Scheme.

Interviews will be conducted on a confidential basis.

Apply to:
Company Personnel Manager,
CYANAMID OF GREAT BRITAIN LIMITED,
Bush House, London, W.C.2.

C 9434

TENDERS

**DARLASTON URBAN DISTRICT COUNCIL
LETTING OF SHOP,
CHURCHILL ROAD,
BENTLEY ESTATE**

The Council invite offers of rent for a lease for seven years of one or two shops now in course of erection at Churchill Road, Bentley (adjoining existing shops), for the carrying on of the business of a retail chemist. If a lease for fourteen years is preferred, an offer on this basis will be considered.

The shop is on a housing estate comprising approximately 1,600 dwellings and there is no chemist's shop on the estate which is still extending.

The Council will be prepared to consider letting the living accommodation over the shop to the person or firm whose offer is accepted. Further particulars, including the conditions upon which the council is prepared to let the shop, may be obtained from the undersigned and must be received by the undersigned not later than 15th September, 1964. The Council do not bind themselves to accept the highest or any offer.

G. R. ROWLANDS,
Clerk of the Council,

Town Hall,
Darlaston,
S. Staffs.

C 9449

LANCASHIRE COUNTY COUNCIL

Tenders are invited for the supply of the following commodities to County Council Establishments:

1. Plastic Emulsion for treatment of thermoplastic, P.V.C. and Sealed Wood floors, etc.
 2. Detergent for floor cleaning.
- Forms and conditions of tender from the Chief Education Officer, P.O. Box 61, County Hall, Preston.
- Tenders to be returned to the Clerk of the County Council, P.O. Box 78, County Hall, Preston, by 18th September, 1964.

C 9442

BUSINESS OPPORTUNITIES

MANLY MAN'S BELT. Nationally advertised "obtainable from chemists," 35/- . Full trade terms. Order by waist from Manly Co., Manor House, Worcester Park, Surrey. DERwent 3877.

C 635

MANUFACTURING FACILITIES available for medicinal, toilet or household products. Bulk or packed. Large or small quantities. Qualified supervision.

READE BROTHERS & CO., LTD., Sharrock Street, Wolverhampton

C 682

SOLE IMPORTERS of a new toilet Bath preparation seek **WHOLESALE-DISTRIBUTOR** Firm for distribution to the Retail Trade as soon as possible. Please contact:

"DUROMAT,"
28 Green Walk, Hendon,
London, N.W.4
Tel.: SUNnyhill 1252.

C 6286

FOR SALE

STANDARD SACCHARIN TABLETS. Packets of 100—3s. doz. Drums of 500—12s. per doz. Drums of 1,000—22s. per doz. Enquiries invited for packed Aspirin and Paracetamol Tablets.

Tell Products, Ltd.,
Welbeck Works,
London, N.W.10

C 683

SITUATIONS VACANT WHOLESALE

Medical Representative

LONDON & LEICESTERSHIRE

Further expansion and promotions from within present opportunities for determined and energetic young men to seek a place in our successful and high-spirited sales team. If you have a relevant pharmaceutical or medical background, or a proven sales record in an allied or technical field, or are sufficiently endowed with the qualities of articulate self-expression, visible physical energy and can *honestly* persuade us that you merit consideration, please write to or telephone:—

Merrell-National (Laboratories) Ltd.,
20 Savile Row, London, W.I. Tel. REGent 4171.

We shall accept reversed charges on genuine calls on Tuesday and Wednesday 1st and 2nd September.

C 9443

**MEDICAL REPS—LONDON & BIRMINGHAM**

sought by young company, where the journey from the bottom to the top can be a matter of months only. Initiative and hard work will lead to speedy promotion. Individualists welcomed. Car and usual perks provided.

Write fully to:
Sales Director,
Dunster Laboratories Ltd.,
14 Yorkshire Street, Rochdale

C 9439

PHARMACIST BRANCH MANAGERS REQUIRED FOR

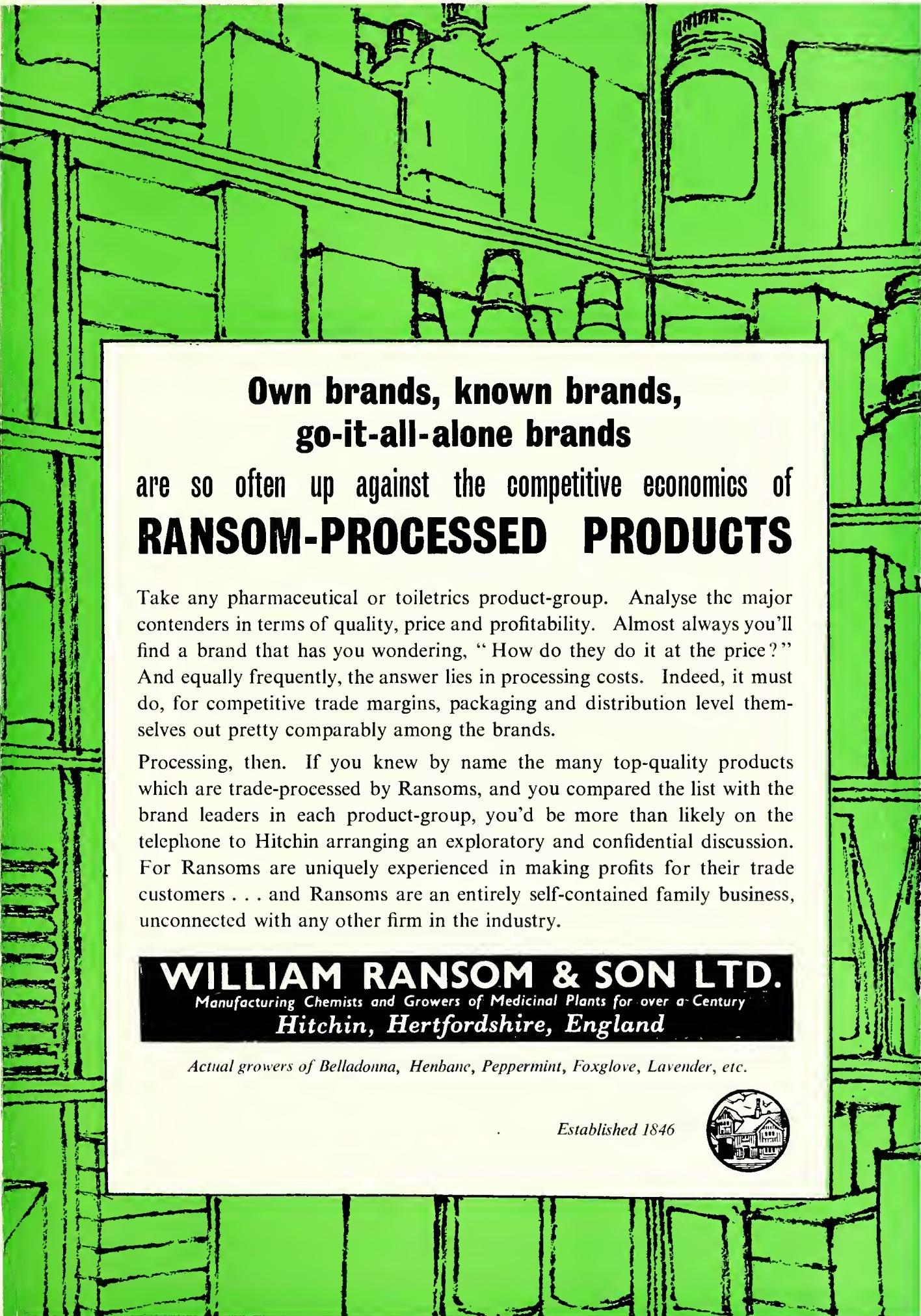
CORBY
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PURLEY
(Surrey)

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(Beds)

They will be joining a firm proud of its staff relationships. Every Manager will be in full charge and expected to use his own initiative. High salary & Pension. Free accommodation or allowance.

Apply to Box C 9440 quoting reference Dept. C.D.



Own brands, known brands, go-it-all-alone brands

are so often up against the competitive economics of
RANSOM-PROCESSED PRODUCTS

Take any pharmaceutical or toiletries product-group. Analyse the major contenders in terms of quality, price and profitability. Almost always you'll find a brand that has you wondering, "How do they do it at the price?" And equally frequently, the answer lies in processing costs. Indeed, it must do, for competitive trade margins, packaging and distribution level themselves out pretty comparably among the brands.

Processing, then. If you knew by name the many top-quality products which are trade-processed by Ransoms, and you compared the list with the brand leaders in each product-group, you'd be more than likely on the telephone to Hitchin arranging an exploratory and confidential discussion. For Ransoms are uniquely experienced in making profits for their trade customers . . . and Ransoms are an entirely self-contained family business, unconnected with any other firm in the industry.

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Manufacturing Chemists and Growers of Medicinal Plants for over a Century

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Actual growers of Belladonna, Henbane, Peppermint, Foxglove, Lavender, etc.

Established 1846





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Baby Rub Vapour Cream	1 oz. jars Unctnd.	11/- doz. + 25% P.T. Own Name
Calamine Cream	1 oz. tubes Ctned.	14/- doz. + 25% P.T. Own Name
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Cream of Lanolin	Tubes Ctned.	9 1/4 doz. + 25% P.T. Cox Name

Usual quantity discounts on all lines · Generous profit margins

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